CARLSBAD
HISTORIC VILLAGE DISTRICT
HERITAGE TREE REPORT
2002

CARLSBAD, CALIFORNIA

Including
ADDENDUM January 30, 2006
and
ADDENDUM II September 30, 2007

WISNIEWSKI & ASSOCIATES
ENCINITAS, CALIFORNIA

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PREPARED FOR

Historic Preservation Commission
City of Carlsbad
c/o Carlsbad City Library

March 15, 2002

Including
ADDENDUM January 30, 2006
and
ADDENDUM II September 30, 2007

PREPARED BY
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ADDENDUM
January 30, 2006

Since the 2002 report was completed 20 trees at 18 tree sites have either been removed for various reasons or have died. Three additional trees at two sites have started to decline and one tree was topped severely. These trees are no longer recommended for heritage tree status.

Changes to the original "Carlsbad Heritage Tree List – 2002" from "Appendix B" are shown as follows:

~~STRIKE THRU~~ text means the tree has been removed, has declined in health so severely that recovery does not seem possible, or the tree has been topped and/or pruned severely.

BOLD text in the data fields indicates new or updated information.

ADDENDUM II
September 30, 2007

Since the Addendum dated January 30, 2006, updated information has been provided by the City staff regarding ownership of the trees, particularly those trees whose ownership was originally unclear. A new chart has been added to page 50 to reflect the current status of tree ownership. Additionally five more trees have been removed.

Additional changes to the original "Carlsbad Heritage Tree List – 2002" in "Appendix B" and "Appendix C" are shown as follows:

~~STRIKE THRU~~ text means the tree has been removed, has declined I health so severely that recovery does not seem possible, or the tree has been topped and/or pruned severely.

BOLD text in the data fields indicates new or updated information.

Please note that no other changes have been made to update the report because of the extensive editing that would have been required.

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Title page: Pinus torreyana (Tree #78)
1168 Carlsbad Village Drive – Photo by Mark Wisniewski

The hand embossed metal plate attached to the tree states:
TORREY
PINE
PLANTED FROM SEED BY
MRS. JAMES A. GREENWOOD
PLEASE DO NOT DISTURB

PREFACE

The author of this report would like to thank the following for their help, cooperation, insight, historical perspective or technical expertise that contributed immensely to this report. Any mistakes, errors or oversights remain the sole responsibility of the author.

The Historic Preservation Commission for their foresight to recognize the need for such a study and for their patience during the research, development and writing stages which all took longer than any of us anticipated.

Mr. Geoff Armour, Assistant Library Director of the Carlsbad Library, my liaison to the Historic Preservation Commission, for his unflagging support, sound direction, gentle persuasion and for making available to me the resources of the Carlsbad Library system and other City departments.

The City of Carlsbad GIS Department for the excellent maps that were produced to show the locations of the study area and the trees.

Marge Howard-Jones for her excellent book “Seekers of the Spring – A History of Carlsbad” that proved to be invaluable during the research for this report and for her assistance in researching historical photographs.

Susan Gutierrez, manager of the Local History Room of the Cole Library, and Ann L’Heureux for their invaluable assistance in researching articles and historical photographs.

Connie Trejo and Ofelia Escobedo for their support, historical knowledge and opening the Barrio Museum to me for research purposes.

Stephanie Dunham, the docent of the Carlsbad Historical Society at the Magee House, who made available the archives of the Society for my review and for providing additional historical information.

Dan Simpson, arborist extraordinaire with the San Diego Zoo for his generous professional assistance on tree review and identification.

Tim Clancy, arborist and computer guru, for providing the computer program and the computer analysis of the tree size and health data with the accompanying reports and for review of the technical information sections.

Luther Gage and the other pioneers of this community without whose efforts at planting and nurturing trees and plants there would be little to study and no legacy of grand and beautiful trees for this and succeeding generations to enjoy.

All the planters, farmers, nurseries, gardeners, arborists, landscape architects and tree trimmers, both amateur and professional, paid and unpaid, who have provided the foresight, muscle, sweat and dedication to collect, grow, plant and care for these pieces of natural beauty and history that we can all marvel at and enjoy.

All of the citizens of Carlsbad who called me or stopped me on the street to give me their opinions, suggestions and recommendations for trees to include in this report. It was impossible to walk down a street with a clipboard in my hand without being stopped repeatedly and asked “What are you doing?”, and “You’re not going to cut down these trees are you?” My answer was always “No, I’m looking at the trees in an attempt to identify, protect and save them.”

To all the citizens of this community past, and present, who valued, protected and at times have fought to preserve this community’s heritage that is reflected and recorded in her trees. This includes the police officers who stopped me because a citizen reported that they thought I was vandalizing a Torrey pine during my inspections. I wasn’t, but I appreciated both the citizen’s concern and quick response from the police.

Special thanks go to my wife Mary for her constant support during this project. Whether walking the streets with me, reviewing the umpteenth report draft for grammatical accuracy or other errors, and for her patience during the numerous hours and weekends I spent on this report instead of with her.

Thank you one and all for your concern and help and for the opportunity to study, enjoy and appreciate all the grand trees that contribute to the natural history, the cultural history and heritage of Carlsbad.

INTRODUCTION

How many times have you heard the quaint, but accurate expression, “You can’t see the forest for the trees?” Well, I found that the reverse is also true - that you often can’t see and appreciate the individual trees for the forest. We all see them. We drive or walk by them frequently or even daily. They may be in our neighbor’s front yard or our own, or a city street tree.

We’ve seen some trees a hundred or a thousand times, but usually we don’t really look at them or study them closely. They are so much a part of the fabric of our lives and the community that sometimes we only really notice them when they are removed. Then we wonder why and sometimes get angry or upset because something that was significant to us, although we may not have fully appreciated it, is gone. There is a void where that tree, which may have been there throughout our entire lives, once stood.

Joni Mitchell in a popular song she composed and sang in 1969 “Big Yellow Taxi” laments, “They took all the trees and put them in a tree museum and they charged all the people a dollar and a half just to see ‘em. Don’t it always seem to go that you don’t know what you’ve got till it’s gone?”

My hope for this study is that people are given an opportunity to learn and appreciate what they have while they have it and perhaps collectively we can keep these significant, strong but silent, members of our community around for a long time. The trees can’t speak for themselves; that is the responsibility of the citizens.

These trees are out here standing on the street corner, down an alleyway, in the parking lot or in your back yard. We don’t have to spend “a dollar and a half just to see ‘em”, but if we do invest in long-term proper tree care and management they just may continue to provide beauty and historical continuity for generations to come. Those future generations will appreciate our efforts and they will not have to go to a tree museum, at least not in the City of Carlsbad.

> *For humankind, the trees—their roots in the ground, their heads reaching into the sky—have seemed always to bind together the universe. Throughout the ages, humankind has looked to the tree to feed not only the flesh, but the spirit.*
>
> George Nakashima, foreword, “The Soul of a Tree”

We will not…shut our eyes to the fact which no observer of men will dispute, that in every age and country are born some persons who belong rather to the past than the present—men to whom memory is dearer than hope—the by-gone ages fuller of meaning than those in the future. These are the natural conservatives whom Providence has wisely distributed, even in the most democratic governments, to steady the otherwise too impetuous and unsteady onward movements of those who, in their love for progress, would obliterate the past, even in its hold on the feelings and imaginations of our race.

Andrew Jackson Downing in "The Architecture of Country Houses, 1850", reprinted by Dover Publications, Inc., 1969, p. 265.

Phoenix canariensis – Canary Island date palms (Tree #12) Luther Gage House/Monterey Condominiums – Photo by City Photographer

Circa 1890. Railroad platform with several 5’-6’ tall
Cupressus macrocarpa – Monterey cypress – Carlsbad Library Photo

ASSIGNMENT

I was asked to review all of the trees growing in the Old Carlsbad Village Area for consideration as candidates for Heritage Tree status. Please refer to the map of the study area in Appendix A. Significant trees were then selected for further evaluation, inventory and listing. Heritage Trees are defined by Carlsbad City Ordinance as “Heritage trees shall be trees with notable historic interest or trees of an unusual species or size.” The 110 trees listed in this report are recommended for consideration by the Carlsbad City Council for designation as Heritage Trees.

The trees were evaluated by walking every public street, alley, parking lot and park, and public space in the study area. The list includes primarily trees in the public right-of-way and park sites, but also includes trees on private property that can readily be viewed from a public street, alley or sidewalk. Lack of access limited the evaluation of trees on private property to readily observable trees and conditions.

The data collected for the inventory included: the genus and species, street address and location, tree site number, height, canopy spread and DBH (Diameter Breast Height) as well as the condition, vigor and ownership of each tree. In some locations of uniform street tree plantings or groves the trees were not individually listed, but the largest representative was evaluated. The trees on private property were not measured, but their size and condition was estimated.

A search of historic photographs and archival material related to trees in Carlsbad was performed with assistance from many individuals. The study includes information on trees with known historic or cultural significance and Appendix I is a collection of newspaper articles and other printed information related to trees.

A comparative research of over a dozen books on trees provided the information included under the detailed descriptions for each genus and species. Technical descriptions often varied from one source to another. The final descriptions draw heavily on published sources. No citation is provided when a number of sources utilized for comparison purposes contained the same or similar information. Descriptions in this study which may be similar to published sources are due to the fact that certain characteristics of trees can only be described in limited ways and these have already been described by others.

After the inventory data and research information was collected and analyzed, this report, including the Management Recommendations, was prepared.

The 110 trees listed in this report are considered worthy of designation as Heritage Trees because of their species, rarity, size, age, shape, historic, or cultural significance. Many other trees were originally considered, but this list is representative of the most noteworthy trees in the study area.

1915. Schutte's chicken ranch at the old Wright home with Monterey cypress and eucalyptus trees to the right of the windmill. – Carlsbad Library Photo

Circa 1890. The Wadsworth "twin" home with Monterey cypress in the garden and along the railroad tracks. Street trees planted and growing prior to extensive development. – Carlsbad Library Photo

HISTORICAL PERSPECTIVE

Before the European exploration and settlement only native trees and plants were to be found in this area. Oaks grew in canyons and along natural drainage paths down the hillsides where additional water collected. Sycamore, willows, alders and cottonwood grew along creeks or other watercourses where the water table was high and where they benefited from periodic stream flows. Pines grew further south in the area of present day Del Mar and the Torrey Pines State Reserve. These trees were adapted to the climatic conditions including the low amounts of rainfall in the winter and spring followed by a long dry season and occasional droughts. They existed where they could obtain the necessary amount of moisture to sustain growth. The more exposed hillsides were covered with lower growing chaparral plants that had even lower water requirements and could flourish on the infrequent rainfall.

Trees were utilized by the native Indian people for many of the necessities of life. The oaks produced acorns and pines produced nuts, both of which were relied upon as food sources. Willows and alders were a source of materials for shelter, tools, weaving and weapons. The wood from the trees was used for cooking fires.

The early Spanish explorers did not find the coastal region with its trees and plants too different from their own Mediterranean region and climate. Even some of the trees, particularly the oaks that they called *Encina*, were similar to those they knew from home.

The Franciscan friars, as they established the extension of their chain of missions from Mexico to Baja to Alta California, introduced many fruit and ornamental trees to the State. The fruit trees included olives, dates, figs, oranges, lemons, limes, pomegranates, plums, peaches, cherries, pears, apricots and almonds. Not all of these were well adapted to the warm winter climate of this area. Many did thrive and provided a variety of food for the mission tables. The misnamed “California Pepper” tree, introduced at San Luis Rey Mission, was planted in the 1830’s from seeds collected in Peru and still survives. It is honored each year with its own celebration. Oaks were harvested for charcoal production and were also used in tanning hides. (Wisniewski pg. 2) Cuttings or offspring of many of these introduced trees found their way to the homesteads and farms of early ranchers and later settlers.

Early Carlsbad settlers were mostly farmers. Former Carlsbad mayor and seedsman Charles Ledgerwood was quoted in the North county Times 03/21/99, “At that time (1933) there were about 1,000 people in Carlsbad and 90 percent of them were farmers.”

With the development of reliable sources of water for irrigation the farmers were able to grow fruit trees in a great variety and abundance. Many of these trees were considered to be exotic at the time they were first planted. The first planting

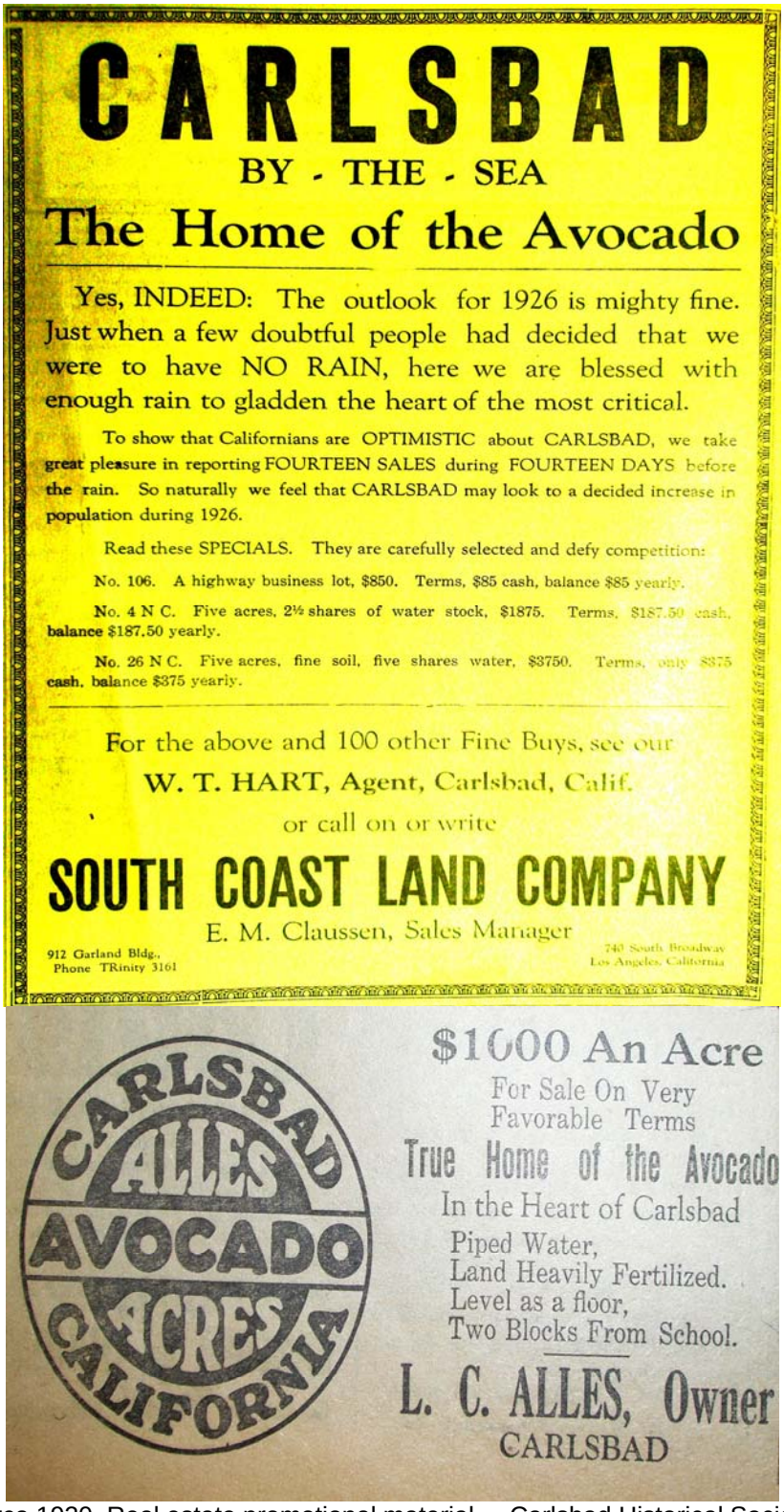
of avocados was made by Sam Thompson in 1916. They soon became such a large part of the local economy that annual Avocado days was the festive highlight of the community and drew visitors from the surrounding communities and throughout Southern California. “Discontinued before World War II, the affair will long be remembered by many Southern Californians as one of the outstanding fair-type celebrations in the state…At noon a splendid avocado luncheon was provided free to everybody. This consisted of avocado salad, avocado sandwiches, avocado ice cream, avocado cake, and coffee.” Crowds as large as ten thousand people often attended these “Avocado Days” celebrations. (Avocado Annual Report)

Carlsbad also touted itself as “The Home of the Avocado.” This moniker was used in promoting the community and the sale of real estate. A few acres of producing avocados could provide a comfortable income in the 1920’s and 30’s. Peak production of avocados occurred in 1947-48. Increased housing pressure and rising property values and deteriorating water quality eventually made avocado growing no longer profitable. Many groves were then subdivided for home sites, a victim of their own success of attracting people to Carlsbad.

Sam Thompson and his son George also planted other fruit trees. At one San Diego County Fair, George won 21 prizes. “In the display were Sapotas, Feijoas, Passion Fruit, Cheramoya, or, as it is commonly known, Custard apple, and the Chinese fruit jujube. The Thompsons are now experimenting with the growing of mangoes and papayas” (see full article in Appendix I). Although some changes in the spelling of these fruits have occurred, this was an amazing variety at the time and didn’t even include several varieties of guava that were also grown in the area.

With irrigation water available people planted not just fruit trees for food at home and for sale, but also shade and blooming ornamental trees from all over the world. Early Carlsbad photos show newly planted *Cupressus sempervirens* – Monterey cypress growing at the train depot. They were planted all along the train tracks through town where they would have formed an impressive wall of green as well as a wind break for ocean breezes. Ten of these trees still exist, but only nine are still alive.

Most of the east-west streets in the village area were named after trees. Starting from south to north, they included Chestnut, Sycamore, Walnut, Pine, Oak, Elm (now Carlsbad Village Drive), Cedar (now Christiansen Way), Beech and Cypress Avenues. Savvy real estate developers have relied on naming streets after trees all across the country. Trees are used for street names because they are easy to remember for the newcomers and they evoke memories of those same trees that they remember from their previous homes, often on the east coast. Tree names just sound homey and solid. Beech, elm and chestnut were not California trees.



Circa 1920. Real estate promotional material. – Carlsbad Historical Society

After the streets were named for trees the early town fathers then planted the fastest growing trees they could find to give the community's streets that shaded tree-canopied look that was prevalent back east. In Carlsbad one of the main trees of choice was a number of the fast-growing eucalyptus species from Australia. Aerial and other photos form the 1920's show many tree-lined streets with tree canopies extending completely over and shading the streets.

Trees seemed to be a part of every man's plan to make money and be successful in early Carlsbad. One of the most ambitious projects "…was initiated in 1907 when Oceanside nurseryman F.P. Hosp translated a coming need for railroad ties into a plantation of Australian eucalyptus trees on a canyon hillside at the northeast end of Carlsbad, overlooking Buena Vista Lagoon. He sold his idea to three Los Angeles businessmen who with him put $1,500 each in to the Hosp Eucalyptus Company. The outside investors, McGee, Martin and Whitaker, received 125 shares each in the projected returns from the trees, which were planted on 219 acres purchased from J.F. and Maria Connell of San Diego.

Hosp planned to plant 1,082 trees per acre, and he guaranteed that his seedlings would be alive and well twelve months after planting. But when a year had passed and only 40,000 trees had been planted on forty-five acres, he had to come back to his principals for more capital. Instead of the $2-million profit they had anticipated McGee, Martin and Whitaker soon were confronted with further losses as they tried to protect their original investment.

The dream came to a dismal end when the first trees were harvested and the newly cut timber resisted all but the most violent attempts to make it usable. Although the logs cut like butter when still wet and green, the tough fibrous wood dried hard as flint. The first time Hosp tried to split a seasoned log, his axe stuck fast in the wood and could scarcely be removed. It did not take long to realize that such wood was not to be milled. The trees were left to become a dense grove that only recently has been eroded by residential development." (Jones pgs. 65-66)

Walking the streets of the Carlsbad Village area today one can see trees from every continent except Antarctica, which doesn't have any trees. There are trees not just from Australia, but also Africa, Asia, North, South and Central America, Europe, and islands in the South Pacific. To find many of the older trees you just have to look at the skyline. Pick out the tall trees that you can see from a distance and walk toward them. Many of these are the trees recommended as Heritage Trees in this report.

Trees not only were planted and cared for; they have also been defended against those who would remove these living records of Carlsbad's past. Kay Christiansen in 1986 tried to stop the removal of a Torrey pine that was a gift to Mr. & Mrs. Mark Koffin from Kate Sessions, who is known as the "Mother of Balboa Park." She was unsuccessful in her effort (refer to Appendix I).

Circa 1908. Carlsbad railroad station with Monterey cypress and street trees. – Carlsbad Library Photo

1960. Carlsbad railroad station still in use with Monterey cypress still growing. – Carlsbad Library Photo

Several of the trees on this proposed Heritage Tree list have been threatened with removal in the past. They were saved by the combined efforts of many individual concerned community members who found they could educate and sway City Hall with information, research and a love for history and beauty. Some people have not only invested their time and money into these efforts, some have literally risked their lives to try and protect and save these irreplaceable trees.

This past year two *Phoenix canariensis* – Canary Island palm trees, which are included on this Heritage Tree list as #12, were saved from being removed by the action of numerous concerned citizens with help from the media. Several newspapers and TV stations carried reports about the efforts to save the trees.

The trees were to be removed because a tree trimmer while pruning one of the trees was attacked by a swarm of killer bees. Although being stung numerous times he managed to climb down to the ground from the top of the tree which is some 70' tall. He then went into cardiac arrest and was only saved by being given immediate CPR by other members of the tree crew before paramedics arrived and took him to a hospital where he recovered. The man was Rich Magargal, a professional tree trimmer and arborist, and a personal acquaintance of the author. Rich told me later that when he first came down from the tree he felt certain that he was going to die right there on the ground.

The Board of Directors of the Condominium Association that owned the trees felt that the trees now represented a hazard and should be removed. Other owners and residents in the Association felt that the trees were a valuable asset to the Association and the community and should be saved. Numerous discussions were held, newspapers articles written, TV stories aired, but the most dramatic information came from the tree trimmer who had almost lost his life pruning the trees. During one television interview Rich Magargal said that he felt so strongly about these special trees that he wanted to prune and save these trees. If necessary, he would volunteer to prune them and do his work at no charge. Besides, he said, "I haven't finished the job." Those are the words of a true professional and a man who knows, values and loves trees. Trees sometimes need to have champions and heroes.

> *In all countries where trees grow, the noblest specimens ought to be preserved as national monuments since…no nation can boast anything more magnificent than the forest giants Nature gave it.*
>
> Ernest H. Wilson, "Aristocrats of the Trees"

1927. Avocado Days. Note the full canopies of the street trees, particularly on Oak Ave. located just to the right of center. – Carlsbad Library Photo

HERITAGE TREES

The 110 trees in the following list are recommended for the designation of Heritage Trees. They individually possess characteristics that make them unique.

Some trees are listed because of their species, others because of their rarity. There are many trees on this list which have great size which is also usually an indicator of age. Some of these trees may also have a unique shape or branching structure, flowers or seed pods. One tree is a relic native tree, others are remnants of the groves and orchards that made Carlsbad an important agricultural community and fueled its growth. These trees collectively have significant historic and cultural importance to this City and add to its beauty and charm.

Many other trees were reviewed and considered. These were further evaluated, some as many as seven times, in order to select the best candidates for consideration as Heritage Trees.

The following list of 110 trees is arranged alphabetically by their genus and species names in Latin. This is the normally accepted manner of listing trees and plants in horticultural books and studies. The Latin names are used because they are universally recognized around the world as the scientifically correct name. However, even these names often get changed over time. In this case previous names or other names that the trees have been known by are also included. Common names are included but are often a source more of confusion than enlightenment as at times more than one plant may be called by the same name.

Place or country or continent of origin is listed as well as a range when that is of interest. Other more scientific texts will provide exact descriptions of habitat limits.

This is a study of a general nature rather than a scientific treatise. A general, rather than scientific, description is provided of the trees. More noteworthy or obvious unique characteristics that may be of interest to the nonprofessional are included. Since many trees are included that may offer educational opportunities for school or library programs, the approach and intent of the author was to offer botanical details and information in a non-technical manner.

A man does not plant a tree for himself; he plants it for posterity.

Alexander Smith, 1863

Circa 1940. Trees shade streets and screen buildings while adding skyline views. – Carlsbad Library Photo

1916. Trees planted by Carlsbad founders shade Elm Ave. (Carlsbad Village Dr.) looking westward. – Carlsbad Library Photo

CARLSBAD HERITAGE TREE LIST – 2002
DESCRIPTION OF SPECIES AND TREES

GENUS/SPECIES	COMMON NAME	LOCATION/ADDRESS	ORIGIN

ACACIA MELANOXYLON BLACKWOOD ACACIA #58-3354 MADISON ST. Australia
Located off the alley this evergreen tree is covered with ivy. A tough tree previously much used in landscapes because of its ability to thrive in intense heat, drought, poor soil and coastal winds. A reminder of earlier landscape plant preferences. "The wood has been used in Australia for cabinetry, decorative work, veneer, and furniture." (McClintock pg.27)

A. SPP. (SPECIES UNKNOWN) NAME UNKNOWN #85-3081 HIGHLAND DR.
SHAW HOUSE on Oak Ave. Interesting evergreen tree with finely divided leaves with nice full canopy. Anyone who can make a positive identification please contact the author of this report at 760-436-5308.

AGATHIS ROBUSTA DAMMAR PINE #55-3156 HARDING ST. Queensland
(aka QUEENSLAND KAURI) Australia
Not a true pine, but a cone-bearing evergreen tree of unusual shape, a tall columnar form with strong trunk and short limbs. Not widely planted in Southern California. Rare in San Diego County. A few larger specimens are located in Balboa Pak in San Diego. In its native habitat it is an important timber tree growing from "120 to 140 feet tall and 3 to 4 feet in diameter." (McClintock pg. 41) Reported by Tanya Sternberg to have been planted by a woman who grew plants for Quail Botanical Garden in Encinitas.

AGONIS FLEXUOSA PEPPERMINT TREE #98-HOLIDAY PARK Western
(aka AUSTRALIAN WILLOW MYRTLE) Australia
This cabled specimen near the north side of the park has extensive splits along its furrowed trunk. Willow-like leaves smell like peppermint when crushed. With age this evergreen tree develops a graceful form similar to a weeping willow. The small white flowers are grouped in clusters.

ARAUCARIA BIDWILLII BUNYA-BUNYA #104-HOLIDAY PARK Queensland
(aka BUNYA-PINE) Australia
Large evergreen tree with rounded canopy near south end of park. Branches densely covered with flat sharp-pointed, glossy dark green leaves. Horizontal branches dip downward and then turn up at the ends. Cones 7"-10" long by 6"-8" wide, weighing up to 10 pounds are pineapple-shaped, can be dangerous when they fall from the tree." The large edible seeds, the bunya nuts, were a staple food of Australian Aborigines. They are starchy, with something of the texture of a boiled potato, and were eaten raw, roasted, ground into flour, or boiled." (McClintock pg. 47)

A. HETEROPHYLLA NORFOLK ISLAND PINE #18-2605 CARLSBAD BLVD. Norfolk Island near
(aka A. EXCELSA) (aka STAR PINE) Australia
RED APPLE INN/ARMY NAVY ACADEMY - There are many examples of this evergreen tree scattered on the grounds with the largest specimen located in front of the administration building and north of main entry walk. This formal pyramidal shaped tree with horizontal spreading branches can reach 100' tall and is used as a Christmas tree in Hawaii. Cones on old trees are round and 4"-6" in diameter. Both the island and the tree were discovered by Captain James Cook in 1774 on his second voyage. He called this tree a spruce-pine. (McClintock pg. 49)

A. CUNNINHAMII HOOP PINE #103-HOLIDAY PARK Australia
This specimen at the southwestern edge of the park is a narrow upright evergreen tree with awl-shaped needles similar to *A. heterophylla* clothed with small leaves. Identified by Dan Simpson as being uncommon in the area and in the state. "The wood of hoop pine, just as that of bunya-bunya, has several economic uses in Australia…" (McClintock pg. 48)

"European explorers who first discovered the trees now placed in the genera *Araucaria* and *Agathis* called them pines because they were evergreen and superficially resembled familiar European cone-bearing trees." (McClintock pg. 48)

Araucaria bidwillii – bunya-bunya (Tree #104) Holiday Park
Note the kite caught in the branches of this “Charlie Brown kite-eating tree.”
Photo by Mark Wisniewski

CARLSBAD HERITAGE TREE LIST – 2002
DESCRIPTION OF SPECIES AND TREES

GENUS/SPECIES	COMMON NAME	LOCATION/ADDRESS	ORIGIN

BAUHINIA VARIEGATA PURPLE ORCHID TREE #64-1231 BASSWOOD AVE. India & China
(aka B. PURPUREA)
This deciduous tree dominates the west side of this property. Flowering reaches a peak in spring on bare branches. Flowers which resemble orchids have broad petals and are light pink to orchid purple in color with white patches. Leaves are broad with two lobes.

BRACHYCHITON DISCOLOR PINK FLAME TREE #46-675 CARLSBAD VILLAGE DR. Australia
(aka STERCULIA DISCOLOR)
Located on Madison St. Unusual, briefly deciduous tree, with a bottle-shaped trunk. Large bell-shaped pink flowers appear in summer. Leaves, 6" wide, are blue-green in color with a whitish underside.

CALLISTEMON RIGIDUS STIFF BOTTLEBRUSH #88-1173 OAK AVE. Australia
This evergreen specimen in the middle of the front yard has a rugged massive trunk and an interesting shape for a small tree. Red flowers like bottle brushes bloom in spring and summer. The narrow leaves are very stiff (rigid).

CASIMIORA EDULIS WHITE SAPOTE #83-3140 HIGHLAND DR. Mexico &
(aka MEXICAN APPLE) Central America
CULVER/MYERS HOUSE - Located on Highland Drive this low-branched tree at the top of the slope has a pronounced swollen trunk.

#91-1103 OAK AVE.
This double-trunked tree is located along the street to the east side of the lot.

This evergreen species can withstand more cold than avocados. It produces a heavy crop of round 3"-4" fruit with pale-green to yellow skin. A mature tree can produce several hundred pounds of fruit each year. Flesh is white to creamy-yellow and has a tropical flavor like sweet banana, bland peach or both and a custard-like consistency. Tree ripened fruit is best eaten with a spoon. The leaves are a bright green with the leaflets arranged around the stem.

CERATONIA SILIQUA CAROB #57-3880 HARDING ST. Mediterranean
(aka ST. JOHN'S BREAD) Region
This tree located along Chestnut Ave. is the largest carob in study area.

#44-2812 ROOSEVELT ST.
Located to the southwest corner of the building in the patio area. As reported by Houston Tucker, Tree #44 is about the same size as it was in 1955 when he planted his tree, #B at 2810 Madison St. Refer to the listing of "other trees and plants of unusual note or interest" at tend of this section for additional information on this tree.

This evergreen tree has light green leathery leaves. The fruit of the carob is a flat leathery pod. "These pods have a high nutritional value and a sweet mealy flavor. Historically, they served as the principal food supply for Wellington's army in the fight against Napoleon, and they are supposed to have been the 'locusts and wild honey' St. John ate in the wilderness. Today they are ground and used for bread and as an ingredient of cereal, candy, spirits and syrup." (Maino pg. 112)

Mr. Tucker said that the fallen ripe fruit from his tree was collected by a local man by the sackful. Mr. Tucker, by chance, found them for sale in a health food store in Renton, Washington and labeled as "Carlsbad Carob."

CHIRANTHODENDRON PENTADACTYLON MONKEY HAND (aka MEXICAN HAND PLANT) #94-HOLIDAY PARK Mexico & Guatemala
Identified by Dan Simpson who claimed that it was an unusual evergreen tree for the San Diego area and a large specimen. The name derives from the shape of the leaves which resemble a hand.

Ceratonia siliqua – carob (Tree #44)
2812 Roosevelt St. - Photo by Mark Wisniewski

Cinnamomum camphora – camphor tree (Tree #51)
3091 Jefferson St. - Photo by Mark Wisniewski

CARLSBAD HERITAGE TREE LIST – 2002
DESCRIPTION OF SPECIES AND TREES

GENUS/SPECIES	COMMON NAME	LOCATION/ADDRESS	ORIGIN

CHORISIA SPECIOSA FLOSS SILK TREE #26-421 GRAND AVE. South America
Thick spines on the heavy trunk are just one unique characteristic of this deciduous tree. Hibiscus-like flowers, which appear after leaf drop in the fall, are 4" across and may be pink, burgundy or a purplish rose in color. The "silk" from the opening seed pods is the source of kapok which has been used for stuffing pillows and mattresses.

CINNAMOMUM CAMPHORA CAMPHOR TREE #51-3091 JEFFERSON ST. China & Japan
One of the best shaped trees in the study area. The full canopy of this evergreen tree covers most of the residence. This beautiful specimen appears to have required or received little pruning during its lifetime. The young leaves are a pinkish bronze color when they first open. They then turn a light green and in the winter have a yellowish-bronze cast. The leaves and twigs of this species are the source of commercial camphor. When crushed, the leaves give off a pleasant camphor odor.

CITRUS SINENSIS ORANGE TREE 'VALENCIA' #43-2777 ROOSEVELT ST. China
This evergreen tree, located in the south end of the patio near the sidewalk, appears to be a remnant of a home orchard. The fragrant white blossoms appear in the spring while the orange colored fruit from the previous season is still ripening and hanging on the tree. The fruit is used primarily for its juice, especially in Florida.

CUPRESSUS MACROCARPA MONTEREY CYPRESS #5-357 CHESTNUT AVE. California
Located in the railroad right-of-way, the largest of nine live and one dead evergreen trees remaining from plantings that once lined the railroad tracks in town. Some of the earliest photos show numerous trees 3'-5' tall. As they grew this wall of green must have been quite attractive as well as serving as a wind break from prevailing ocean winds. Trees were also planted in stands and as street trees along roads. Many trees appear to have been pruned as hedges and topiaries in residential gardens. This species grows naturally only on the Monterey peninsula where it is found in picturesque wind shaped stands and as contorted individual trees at Cypress Point and in Point Lobos State Park often growing right at the edge of ocean cliffs. "Its distribution is the most restricted of any California tree and perhaps of any conifer in the world…Monterey cypress is listed in the California Native Plant Society's *Inventory* as endangered in part of its range." (McClintock pg. 75)

DODONAEA VISCOSA HOP BUSH (aka HOPSEED BUSH) #28-2956 ROOSEVELT ST. #3 Arizona – Hawaii & New Zealand
Usually seen in the landscape as a shrub, this small evergreen tree at the southwest corner of the building in this location has gray shaggy bark and dark green willow-like leaves. Widely distributed in the warmer parts of all continents except Europe and Antarctica. Early Australian settlers used the fruits as a substitute for hops. (McClintock pg. 82) Papery seed capsules, which may be red, pink, yellow, tan or green, form in late spring or summer following inconspicuous flowers. The seed capsules are used for leis in Hawaii.

DOMBEYA WALLICHII DOMBEYA #50-3048 JEFFERSON ST. Madagascar
(variety – 'BITTERNETIA HYDRANGEA LIGHT' note: spelling not verified)
HESS HOUSE - This tree is located in front of the house along the south side of the property where the branches overhang both the house and the sidewalk. The tree is covered with large pendulous pink hydrangea-like flowers with dried flowers remaining on the tree. This amazing tree sports a maze of branches because of the relatively little pruning it has received over the years. Some pruning to provide an arbor-like passage for pedestrians on the sidewalk and more severe pruning from the adjoining commercial property have taken little away from this remarkable tree. Reported by Craig Turner, a resident on the property, to have been planted by Mrs. Hess over 75 years ago. He also reported that the variety was identified by Virginia Tacket, the niece of the original owner. This tree is in the same plant family as the *Brachychtion discolor* – Tree #46.

Cupressus macrocarpa– Monterey cypress (Tree #5)
357 Chestnut Ave. - Photo by Mark Wisniewski

CARLSBAD HERITAGE TREE LIST – 2002
DESCRIPTION OF SPECIES AND TREES

GENUS/SPECIES	COMMON NAME	LOCATION/ADDRESS	ORIGIN

DRACAENA DRACO DRAGON TREE #79-1166 CARLSBAD VILLAGE DR. Canary Islands
PARK MAINTENANCE & ADMINISTRATION OFFICE – This evergreen tree has a stout smooth gray trunk and large 2' sword-like leaves. Flowers are clusters of greenish white and form at the ends of the branches. Grows to 60' tall in its native habitat. "It attains great age, one specimen, at Teneriffe, which was blown down in 1868, was famous for centuries and was long believed to be the oldest tree in the world. When blown down it was 70' high and had a trunk girth of almost 45' feet." (Everett pg. 86) The sap is red and is called "Dragon's Blood". Dried it is used for coloring in varnishes and is reported to have been used to impart its distinctive color to the Stradivarius violins.

DURANTA ERECTA SKY FLOWER #35-2865 JEFFERSON ST So. Florida, West
(aka D. REPENS, (aka GOLDEN DEW, PIGEON BERRY Indies & Mexico to
D. PLUMIERI) Brazil

This small evergreen tree is located at the southeast (front) corner of the house and looks like a sprawling shrub, which is a typical growth habit. Normally this plant grows only to 6'-10' wide. The common names come from the tubular shaped violet-blue flowers and the clusters of waxy yellow berries that grow from 1"-6" long.

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ERYTHRINA CAFFRA CORAL TREE #27-507 GRAND AVE. South Africa
(aka E. CONSTANTIANA) #40-LT. MAXTON BROWN PARK
The "coral" refers to the large clusters of deep red-orange tubular flowers that appear from February to March, primarily on the ends of the bare angular branches. The flowers can drip nectar. The tree is briefly deciduous with light green foliage following the flowers. The large trunk and limbs have a yellowish color and are studded with sharp thorns. Many coral tree owners never experience the full beauty of the flowers because they often prune their trees in winter before bloom and remove the terminal flowers. The best time to prune is just after the blooming period is finished because it takes up to eleven months for flower buds to form.
Note: The bean-like pods contain poisonous seeds.

EUCALYTUS CITRIODORA LEMON-SCENTED GUM #102-HOLIDAY PARK Eastern
(aka CORYMBIA CITRIODORA Australia
One of a group of five tall evergreen trees located near the center of the park south of the bandstand. This species is known for its smooth straight trunk. When the deciduous bark drops in early summer the new white or pinkish bark is revealed. The lower half to almost two-thirds of the trunk can be bare of branches. Inconspicuous clusters of white flowers occur in the fall. The name is derived from the foliage which gives off a pleasant lemon-citrus odor, especially after a rain storm.

E. CLADOCALYX SUGAR GUM #2-395 CARLSBAD VILLAGE DR. South
(aka E. CORYNOCALYX) #16-380 CHRISTIANSEN WAY Australia
#30-600 BLOCK GRAND AVE.
#32-2910 JEFFERSON ST. (located on Grand Ave.)
#33-865 GRAND AVE.
#63-500 BLOCK OAK AVE.
#93-HOLIDAY PARK
#95-HOLIDAY PARK.
#96-HOLIDAY PARK
Many very large specimens of this evergreen species grow throughout the study area. Only the largest most impressive trees are on this list. One of the largest is Tree #63 which has a diameter of 8' at breast height (54" above the ground) and a swollen base that has a diameter of 14' at ground level. Some of the other *E. cladocalyx* have a wider canopy spread such as Trees #16 and #95 or are taller such as Tree #95, but this is one of the most impressive skyline trees in town. Many of these exceed the heights and canopy spread that is listed in the literature. Don Langley who lived in Australia said that Tree #63 was bigger than any he knew of there. The new foliage is a coppery red color and the creamy white flowers are inconspicuous.

Dracaena draco – dragon tree (Tree #79)
1166 Carlsbad Village Dr. - Photo by Mark Wisniewski

CARLSBAD HERITAGE TREE LIST – 2002
DESCRIPTION OF SPECIES AND TREES

GENUS/SPECIES	COMMON NAME	LOCATION/ADDRESS	ORIGIN
E. CONFERRUMINATA (formerly E. LEHMANNII)	BUSHY YATE LEHMANN'S MALLEE	#39-LT. MAXTON BROWN PARK	West Australia

Located along the east side of the park this spreading evergreen tree has almost twice the canopy spread as noted in the literature for this species. This tree appears to have lost some branches recently and has also suffered from some poor pruning. Some of the light green 2" long leaves may turn red in the fall. It has green flowers in 4" clusters and large woody seed capsules that remain attached to the branches.

E. FICIFOLIA (aka CORYMBIA FICIFOLIA)	RED-FLOWERING GUM (aka CRIMSON-FLOWERED EUCALYPTUS, SCARLET GUM)	#7-3288 GARFIELD ST.	West Australia

This evergreen tree located just to the north of the house has a slightly swollen base which is common in this species. The deep green thick leathery leaves can be similar in appearance to the rubber plant. The showy 1" flowers are usually red in this species and occur in clusters up to a foot long. Peak bloom is in summer, July to August, but may have some flowers through the year. Other flower colors include orange, pink, salmon, cream or white. "Red-flowering gum has a restricted distribution in Australia…[I]s so rare that it is included in a list of endangered Australian eucalyptus." (McClintock pg. 88)

E. GLOBULUS	BLUE GUM (aka TASMANIAN BLUE GUM)	#9 -3003 CARLSBAD BLVD. #31-2943 JEFFERSON ST. (located in alley) #71-3384 HIGHLAND DR. #72-3276 HIGHLAND DR.	Australia & Tasmania

COHN/ROYAL PALMS/FIDEL'S - Located to the southeast of the patio area surrounded by a sidewalk.

The juvenile leaves are silvery in color and oval shaped. The mature leaves of this evergreen tree are dark green, sickle-shaped and 6"-10" long. This species can grow to heights of 165' and develop a very large massive trunk. It was widely planted throughout California for windbreaks and in plantations and groves. The light brown bark peels off the trunks in large sheets in the fall. The creamy white flowers are inconspicuous. The fruit is a button-shape capsule with 4 ribs and nearly 1" across. "Blue gum is the most commonly planted eucalypt, not only in California but around the world." (McClintock pg 89) In many locations in this state it has self-seeded and taken over native plant habitats.

E. POLYANTHEMOS	SILVER DOLLAR GUM (aka RED BOX)	#21-164 PACIFIC AVE.	Eastern Australia

This specimen is unusual for its multiple trunks and its large canopy. The evergreen foliage is distinctive for its gray-green nearly round juvenile leaves about the size and color of silver dollars. The dark green mature leaves are lance-shaped. The juvenile foliage is used in the floral industry for both fresh and dried arrangements. The rough bark, which peels in flakes and strips, is gray in color.

E. VIMINALIS	MANNA GUM (aka RIBBON GUM)	#105-HOLIDAY PARK	Australia & Tasmania

The branches shed large strips (or ribbons) of deciduous tan bark and then reveal new white bark below. This evergreen tree can grow to 150' tall and does best where it has a lot of room to grow such as in this setting near the south end of the park. The flowers which are small and white are usually too high in the canopy to be seen. "Manna gum has been given this common name because the bark exudes a pleasantly tasting manna-like substance that Australian Aborigines used for food…[I]t is the chief food tree of koalas and, because it is widely cultivated in California it is also used to feed koalas exhibited in California zoos." (McClintock pg. 93)

Eucalyptus cladocalyx – sugar gum (Tree #63)
500 Block Oak Ave. - Photo by Mark Wisniewski

CARLSBAD HERITAGE TREE LIST – 2002
DESCRIPTION OF SPECIES AND TREES

GENUS/SPECIES	COMMON NAME	LOCATION/ADDRESS	ORIGIN
FICUS MACROPHYLLA	MORETON BAY FIG	#10-3003 CARLSBAD BLVD.	Australia - Queensland & New South Wales

COHN/ROYAL PALMS/FIDEL'S – the large evergreen tree covering the entry deck has an undated metal tag that claims that the tree is "85 years old." The tag has been attached to the tree for a number of years. The building was completed by Albert Cohn in 1929. If the landscaping was completed at the same time the tree would have been planted 73 years before 2002. It is unlikely that the tree was planted before the property was developed based on reviewing early aerial photos. The tree could have been either grown in a container or field-transplanted as a large specimen. Any additional information would be interesting to document.

#20-2605 CARLSBAD BLVD.

RED APPLE INN/ARMY NAVY ACADEMY - The Red Apple Inn was built in 1927 and presumably would have been landscaped at about the same time. This large spreading specimen, located northeast of the administration building, is the most massive tree in Carlsbad. It most likely predates the tree at Fidel's by a couple of years, but it is substantially larger because it is growing in a more open setting and is not constrained by buildings that require the Fidel's tree to be pruned more frequently in order to reduce the size of its canopy. The species is known for its massive buttress roots that grow many feet from the trunk and provide support for the large spreading canopy and huge limbs. Macrophylla refers to the large leathery leaves 10" long and 4" wide which are glossy green on the top and brownish on the bottom.

Locally, this tree may be larger than a well known specimen in Balboa Park in San Diego that "stands alone in a lawn to the north of the Natural History Museum. Planted in 1915 from a five-gallon can, it is over 60 feet tall and has a crown diameter of more than 100 feet." (McClintock pg. 96)

One of the best known specimens in the country is located in Santa Barbara just west of the train station. "Planted in 1877 from a small flower pot by 9-year-old Adeline Crabb, in 1960 it had a trunk circumference of 30 ½ feet and a crown spread of 145 feet despite pruning of lateral branches for building and traffic clearance." (Muller pg. 102) An even larger specimen is located in Fig Tree Park in Los Angeles. "[T]his specimen is the most massive cultivated tree in the greater Los Angeles area, surpassing an even more famous tree of the same kind at the railroad station in Santa Barbara. It is close to 100 years old and nearly 100 feet tall, spreads over more than ¼ acre and has a trunk that is an astounding 34 ½ feet around." (Hodel pg. 35)

F. MICROCARPA	INDIAN LAUREL FIG (aka CHINESE BANYAN)	#23-2497 OCEAN ST. #47-825 CARLSBAD VILLAGE DR. (located on Jefferson St. – 2 matched trees) #62-3150 ROOSEVELT ST. #87-1340 OAK AVE.	Malay to Borneo

These are the largest and some of the best examples of this species selected from the numerous choices available in the study area. This evergreen tree is known for its smooth light-gray trunk and heavy canopy of bright green 2"-4" long leaves. New leaves are light rose to chartreuse in color and are produced almost continually. The tree often develops a weeping form if the lower branches are not removed and the tree is not heavily pruned. This tree develops a vigorous root system and in moist locations numerous aerial roots.

F. RUBIGINOSA	RUSTY LEAF FIG	#53-897 OAK AVE	Australia

Located near the northeast corner of the property this evergreen tree has developed an attractive low-branching structure. The leaves are usually about 5" long, dark green above. The tree derives its name from the rust-coloring and sometimes woolly texture on the undersides of the leaves.

Ficus macrophylla – Moreton Bay fig (Tree #10)
Cohn/Royal Palms/Fidel's
3003 Carlsbad Blvd. - Photo by Mark Wisniewski

1983. *Ficus macrophylla* – Moreton Bay fig (Tree #20)
Red Apple Inn/Army Navy Academy
2605 Carlsbad Blvd. - Carlsbad City Library Photo

CARLSBAD HERITAGE TREE LIST – 2002
DESCRIPTION OF SPECIES AND TREES

GENUS/SPECIES	COMMON NAME	LOCATION/ADDRESS	ORIGIN

FRAXINUS UHDEI EVERGREEN ASH (aka SHAMEL ASH) #99-HOLIDAY PARK Mexico to Guatemala

Located just to the north of Tree #100 along Pio Pico Drive, tall evergreen to semi-evergreen tree with dark-green leaves. Exceptionally large specimen. "It is frequently planted as a street tree in Mexican cities, including Mexico City and Guadalajara." (McClintock pg. 97)

F. VELUTINA ARIZONA ASH #100-HOLIDAY PARK Mexico & SW U.S.

Located just to the south of Tree #100 along Pio Pico Drive, tall deciduous tree with light-green leaves and bright yellow fall color. Exceptionally large specimen.

GREVILLEA ROBUSTA SILK OAK (aka SILKY OAK) #82-1542 OAK AVE. Australia

SHIRLEY/DE LA MOTTE HOUSE – The tall tree located adjacent to the street at the east end of the property. Fern-like leaves are dark green to golden-green on top and silvery and silky on the underside. Profuse bloom in spring with large clusters of bright golden-orange flowers occurs when trees are sometimes briefly deciduous. Flowers can produce large amounts of nectar for birds. Wood can be brittle and branches can break from the tree. The oak part of common name comes from oak-like grain of the wood. The wood is highly prized and valued by woodworkers and who often refer to it as "Lacewood" because of its delicate appearance.

HYMENOSPORUM FLAVUM SWEETSHADE #76-1307 PINE AVE. Australia

Two upright, slender and open evergreen trees with smooth bark located in front of the house. Branches grow in spaced tiers from the trunk. The common name derives from the wonderful orange blossom-like fragrance of the blooms which appear in spring to early summer. The fragrance can carry for quite a distance. The tubular flowers start as cream-colored deepening to golden-yellow and have a red marking in the throat.

JACARANDA MIMOSIFOLIA JACARANDA #59-799 PINE AVE. Brazil
(aka J. ACUTIFOLIA, J. OVALIFOLIA)

CARLSBAD SENIOR CENTER – A multiple-trunk tree located along the west side of the parking lot.
#70-3454 HIGHLAND DR.

The tree is located at and overhangs the southwest corner of the house.

This species is partially deciduous, usually dropping leaves in February to March. The tree is normally bare or with light foliage at the time it starts blooming. The lavender-blue 2" long tubular flowers appear in mid to late spring, but blooms may continue into summer or even occasionally into fall. The leaves are very finely divided and ferny looking. The brown flattened seed capsules hang on the tree and look like miniature castanets. They are sometimes used in floral arrangements or can be strung and used for beads. This tree was introduced into the nursery industry and popularized by Kate Sessions a well known horticulturalist and nursery owner in the San Diego area. Highly prized for making heirloom quality furniture in Brazil. (personal communication from Michael Mahoney)

JUNIPERUS CHINENIS 'TORULOSA' (aka 'KAIZUKA') HOLLYWOOD JUNIPER #67-3270 MCKINLEY ST. Los Angeles area nursery

A multi-trunk evergreen tree located along the north side of the lot. This specimen is a larger and more spreading than is typically found. Typical size is 15' tall by 10' wide. The name is derived from its irregular and twisted appearance. This plant was also popularized by Kate Sessions and used frequently in the gardens she designed and built. She also introduced many other new plants into the nursery industry.

Leptospermum laevigatum – Australian tea tree (Tree #13)
Luther Gage House/Monterey Condominiums
3080 Lincoln St. - Photo by Mark Wisniewski

Jacaranda mimosifolia – jacaranda (Tree #59)
799 Pine Ave. - Photo by Carlsbad City Photographer

CARLSBAD HERITAGE TREE LIST – 2002
DESCRIPTION OF SPECIES AND TREES

GENUS/SPECIES	COMMON NAME	LOCATION/ADDRESS	ORIGIN
LEPTOSPERMUM LAEVIGATUM	AUSTRALIAN TEA TREE	#13-3080 LINCOLN ST.	Australia

LUTHER GAGE HOUSE/MONTEREY CONDOMINIUMS – This spreading specimen is located on the north side of the courtyard. Its evergreen foliage has been shaped into tufts concentrated at the ends of the branches by a style of ornamental pruning called topiary. “Called tea tree because Captain Cook brewed a tea from the leaves and gave it to his crew as a scurvy preventive.” (Brenzel pg. 428) The twisted and curving trunk and braches with the shedding bark give the tree a sculptural look. “This tea tree was among the first trees from Australia to be introduced into California…[I]t was listed by William Walker in his Golden Gate Nursery catalogue of 1858…” (McClintock pg. 112)

LEUCAENA GLAUCA	WHITE POPINAC	#60-3250 ROOSEVELT ST	Mexico Tropical America & Florida, Texas

Located in the northeast corner of the backyard of the house. This tree is best seen from the alley. The owner related that this tree was grown from seeds that his uncle brought from Mexico. It has a smooth clean gray trunk with very finely divided and fern-like foliage. The flowers are white balls about 1” diameter and hang in clusters. They are followed by bean-like seed pods. This tree is in the Leguminosae family as are the Acacias. Legumes have the ability to make (called fixing) their own nitrogen because of specialized nodules that develop on their roots. This nitrogen acts like a fertilizer for the plant. This ability may help account for the robust growth of this tree.

LIQUIDAMBAR STYRACIFLUA	AMERICAN SWEET GUM (aka AMERICAN STORAX)	#109-HOLIDAY PARK	Eastern U.S. & Mexico, Central America south to Nicaragua

This deciduous tree has a straight single trunk and a tapered shape. The leaves are palmate in shape with 5-7 lobes. This species is noted for its vibrant fall colors of reds and yellows. Some named varieties have fall colors of maroon, yellow-orange, or pink. Green balls are clusters of tiny female flowers then the dried spiny balls often hang on the tree or cover the ground after the seeds are shed. There can be a considerable amount of debris from a large tree. The mass of surface roots is very noticeable on this tree and is common for the species. This is one tree that should not be planted near any type of paving. This is about the only tree in the park showing any amount of surface roots. This is a tree that is best planted in an open area like it is here. The “liquid” refers to, “The resin, or storax, obtained from the tree is seldom used in the United States, but in Mexico and Central America it is much used medicinally and for its fragrance… Bernal Diaz del Castillo, who accompanied Hernando Cortes in 1519 during his conquest of the Aztec empire and overthrow of the emperor Montezuma II, describes the emperor, after dining, inhaling smoke from tobacco mixed with the resin.” (McClintock pgs. 113-114).

MAGNOLIA GRANDIFLORA	SOUTHERN MAGNOLIA (aka BULL BAY)	#84-3125 HIGHLAND DR.	Southern U.S.

This large broad-leaf evergreen specimen dominates the backyard of the residence. The leaves are dark green on top and a rusty-brown on the bottom. They are leathery and stiff 3”-10” long and 2”-4” wide. The species is noted for its large fragrant pure-white to light-yellow colored blossoms. The flowers are cup-shaped and can be 6”-10” across with fleshly petals. Bloom occurs throughout the year, but most heavily in April to July. In the fall, brown cone-shaped fruits with bright red seeds decorate the tree. This is the noted tree of southern plantations where its scent would fill the air on warm summer nights.

Melia azedarach – Texas umbrella tree (Tree #38)
Note: Tree house platform.
2714 Madison St. - Photo by Mark Wisniewski

CARLSBAD HERITAGE TREE LIST – 2002
DESCRIPTION OF SPECIES AND TREES

GENUS/SPECIES	COMMON NAME	LOCATION/ADDRESS	ORIGIN

MELIA AZEDARACH 'UMBRACULIFORMIS' TEXAS UMBRELLA TREE #38-2714 MADISON ST. China, Northern India & the Himalayas

This deciduous tree is easily identified at this location by the tree house built into its canopy. The dome-shaped canopy, which has a heavy cover of large feathery leaves in summer, gives this variety its common name. The common name for the main species is Chinaberry because the fruit is a shiny smooth yellow ball ½ - ¾" in diameter. When dried they can be strung as beads. The lilac-colored flowers are fragrant and appear in loose clusters up to 8" long in April to May and are followed by the yellow fruits. This tree is tolerant of hot dry conditions and poor soil. This tree reseeds readily and produces a considerable amount of litter.

Note: The fruit is poisonous if eaten by people, although it has been fed to cattle and birds eat the seeds.

METASEQUOIA GLYPTOSTROBOIDES DAWN REDWOOD #108 HOLIDAY PARK China

This tall slender pyramid of a tree is a deciduous redwood related to the evergreen coast redwood (*Sequoia sempervirens* – Tree #65) of northern California and the giant sequoia or big tree (*Sequoiadendron gigantea*) of the western slopes of the Sierra Nevada. It is also related to the bald cypress (*Taxodium*) species. The needles are a light green and soft to the touch compared to the stiff dark green needles of the coast redwood. They turn a warm yellowish brown or take on a bronze color in the fall before they drop, revealing an interesting silhouette of trunk and branches. The cones are small and the bark on young trees is reddish, turning darker with age.

"Numerous kinds of trees living today have persisted with little or no change since remote geological times and are well represented by ancient fossils. But the term "living fossil" seems to be applied chiefly to the *Metasequoia* because it was described and named from fossil records before it was known to exist in present world flora. The first living specimens—three of them—were discovered by a Chinese forester in 1941 not far from Chungking, but it was not until 1946 that the tree was identified as of a genus previously unknown in a living state." The foliage is used as cattle fodder in the part of China where the tree grows naturally. (Everett pg. 42)

Seed was first sent to the United States in 1946 to the Arnold Arboretum at Harvard University and then was distributed to other universities, parks, botanical gardens and some individuals. One tree that still existed in 1996 in the remote village of Madaoqi, China was revered as the home of a god. This tree was estimated to be over 450 years old. Many trees have been planted as street trees both in Madaoqi and throughout China. (McClintock pgs. 130-131)

METROSIDEROS EXCELSUS (aka M. EXCELSA & TOMENTOSUS) CHRISTMAS TREE (aka – POHUTUKAWA, RATA) NEW ZEALAND #22-2480 OCEAN ST. New Zealand

This evergreen multiple-trunk tree is located on the north side of the lot. Its common name derives from the big clusters of dark red flowers that bloom in December (spring time) in New Zealand and were used by early European settlers there as Christmas decorations. In California bloom is in late spring to early summer. On older trees the leaves are dark green on the top with a white woolly underside. This is a tree that can tolerate salt spray near the ocean. In areas of high humidity or frequent fog they can develop numerous reddish-brown fibrous aerial roots hanging from the trunk and branches. It is native to New Zealand's North Island forests and along its rocky seacoast. "[T]he Maoris called it *pohutu-kawa*, meaning salt sprinkled. The Maoris revered the tree, and several of their legends about it have come down to us." (McClintock pg. 133)

"The name *Metrosideros* combines two Greek words: *metra*, meaning heartwood or core, and *sideros*, meaning iron. It alludes to the hardness of the heartwood…In New Zealand, trees of metrosideros had several uses. Of particular value was their hard, tough, durable wood, which was used at one time by the Maoris and early European settlers in boatbuilding. Wood of *Metrosideros excelsa* was often used to hold together boat hulls made of kauri (*Agathis australis*). The wood was also used in general carpentry. *Metrosideros excelsa* also had medicinal uses: the nectar from flowers was used for sore throats, and an infusion of the inner bark was a treatment for diarrhea." (McClintock pg. 132)

Metasequoia glyptostroboides – dawn redwood (Tree #108)
Holiday Park - Photo by Mark Wisniewski

CARLSBAD HERITAGE TREE LIST – 2002
DESCRIPTION OF SPECIES AND TREES

GENUS/SPECIES	COMMON NAME	LOCATION/ADDRESS	ORIGIN
NERIUM OLEANDER	OLEANDER	#54-3115 HARDING ST.	Mediterranean Region

Although normally seen as an evergreen shrub, this unusually shaped tree with three trunks is growing in a small raised planter at the edge of the sidewalk. The full extent of the branches is difficult to make out because of intertwined branches from other trees. Bloom period extends from spring to late fall.
Note: All parts of this plant are poisonous if eaten. Smoke from burned prunings can also cause irritation.

OLEA EUROPAEA	OLIVE	#90-3050 PIO PICO DR.	Mediterranean Region

This is the largest of the 23 evergreen trees lining Oak Ave. at the rear of the addressed property. This tree can survive and adapt to difficult growing conditions of poor soil, high heat and low rainfall. The trunks becoming gnarled and developing swollen bases with age. The foliage is willow-like and a dull gray-green in color above and silvery below. An abundant amount of small creamy-yellow flowers occur in mid-spring. The olives turn black as they ripen and drop from the tree in early winter. The fruit is inedible without processing to remove bitterness. This is normally done with a salt brine or vinegar to cure the fruit. Olive trees are one of the most widely recognized trees around the world.

"Almost all of the olives cultivated in the United States are grown in California…There are said to be commercially valuable trees 400 to 500 years old still bearing fruit in Greece, Italy and Spain…It is said that in the Garden of Gethsemane there are still stumps of ancient olive trees believed to have sprouted from trees that grew during Christ's lifetime. Olive wood is hard and heavy and has been used for making tools and in cabinetwork. The use of the olive branch as a symbol for peace and goodwill predates Christianity; the origin of the practice is obscure…Among the earliest trees to be introduced into California, olive was first planted in 1769 at Mission San Diego from seeds brought from San Blas, Mexico, by Father Junipero Serra, the mission's founder. From there, the tree was taken to other missions, and subsequently planted throughout California for shade, ornament and fruit." (McClintock pgs 144-145) It has also been highly prized for centuries for its oil.

PERSEA AMERICANA	AVOCADO	#49-3048 ROOSEVELT ST.	Guatemala

(or may be **P. drymifolia** from Mexico)
HESS HOUSE – Large dark green tree located in the rear of the property, best seen from the alley
#66-3315 MCKINLEY ST.
There are several trees at this address, a remnant of a grove, with the largest tree located along Basswood Ave.

Avocado trees are evergreen with large dark green leaves and a gray trunk. They are most noted and prized for their fruit which can vary from green to purple to almost black on the outside with a yellowish oily delicately flavored flesh on the inside. They used to be called alligator pears because of the rough texture of the fruit.

Commercial avocado production was very important in the development of Carlsbad which was widely promoted as "The Home of the Avocado." Many small groves were put in and attracted home buyers to the area who could make a living off of their property. Avocado days in the 1920's also brought many visitors to the city and promoted the crop by serving many food dishes prepared with avocados including avocado ice cream.

Agonis flexuousa – peppermint tree (Tree #98)
Holiday Park - Photo by Mark Wisniewski

CARLSBAD HERITAGE TREE LIST – 2002
DESCRIPTION OF SPECIES AND TREES

GENUS/SPECIES	COMMON NAME	LOCATION/ADDRESS	ORIGIN
PHOENIX CANARIENSIS	CANARY ISLAND DATE PALM	#6-350 CHESTNUT AVE. #8-3288 GARFIELD ST. (six street trees) #12-3080 LINCOLN ST. LUTHER GAGE HOUSE/MONTEREY CONDMINIUMS (2 trees at entry walk) #15-300 CARLSBAD VILLAGE DR. (in the courtyard) #80-3016 HIGHLAND DR.	Canary Islands

This large distinctive palm tree is imposing in its size and character wherever it is planted. These are some of the largest and nicest specimens in the area. The two trees (#12) at the Monterey Condominiums are particularly tall specimens and can be seen on the skyline from many locations in the city. The frond is shaped like a feather and the crowns can reach 50' across. The trees are normally pruned to remove old fronds and the frond bases are then shaped to have a "pineapple"-like ball below the remaining fronds. This results in a diamond pattern on the trunk from the trimmed frond bases. The yellowish fruits are edible, but do not compare in taste or quality to the date palm listed below. "Canary Island date palm was introduced into California in the late 1800's." (McClintock pg. 149)

P. DACTYLIFERA	DATE PALM	#24-258 BEECH AVE.	North Africa

SHIPLEY/MAGEE HOUSE – A group of trees located at the northwest corner of the house. The trunks of these feather palms have developed a rugged weathered character over time. This is the palm one associates with desert oases and Arabian Nights. The fruit that develops only on the female trees is ready to eat when it is mature. Often it is steamed or processed to obtain its sugar which is of nutritional value. This species has been cultivated for centuries as a food crop. It is an important economic resource in Africa and the Middle East. In California it was introduced into cultivation in the Coachella Valley around 1900 where it remains a significant crop plant. It is also valued as an ornamental tree. (Perry pg. 239)

PINUS HALEPENSIS	ALEPPO PINE	#42-2772 ROOSEVELT ST. #74-1366 PINE AVE.	Mediterranean Region

Located at the northwest corner of the Post Office.

The largest tree of a group of six street trees is the one furthest to the west with a double trunk. The location under the power lines requires frequent and sometimes severe pruning of these trees.

This is a fairly fast growing evergreen conifer that tends to have an open canopy with age. The light green needles are usually in bundles (called fascicles) of 2s and are 2 ½" – 4" long. The cones are 3" long and are oval to oblong in shape. They are stalked and bent backwards. This species is tolerant of poor soils, heat and drought.

P. RADIATA	MONTEREY PINE	#56-799 PINE AVE.	Central California Coast

One of the largest street trees long Pine Ave. is located at the southwest corner of Pine Ave. and Harding St. This evergreen conifer has a dense canopy with dark green needles in 3s and 2s and 3"-7" long. The cones tend to be lopsided and persistent on the tree. They are 3"-6" long, oval-shaped and brown in color. When planted in hot and dry locations in California this species tends to be short lived. These street trees seem very well adapted to this area near the coast.

This tree grows naturally in only three areas along the Central Coast of California. "Because of its limited distribution, Monterey pine is considered rare, but it is not an endangered species." (McClintock pg. 157) World wide it is the most widely planted pine. "[I]ts most extensive plantings have been in the Southern Hemisphere. There, it is the most common pine for reforestation and afforestation in South Africa, South America, Australia, and New Zealand; it is harvested in those regions for both lumber and paper." (McClintock pgs. 156-157)

Pinus torreyana – Torrey pine (Tree #69)
3546 Highland Dr. - Photo by Mark Wisniewski

CARLSBAD HERITAGE TREE LIST – 2002
DESCRIPTION OF SPECIES AND TREES

GENUS/SPECIES	COMMON NAME	LOCATION/ADDRESS	ORIGIN

P. TORREYANA TORREY PINE #11-3001 CARLSBAD BLVD. California & San Diego Co.

Large specimen located on Carlsbad Village Drive, a skyline tree – frames a view of the ocean.

#69-3546 HIGHLAND DR.

This is one of the biggest Torrey pines in the state at 100'-120' tall.

#73-3154 HIGHLAND DR.

#75-1308 PINE AVE.

#78-1166 CARLSBAD VILLAGE DR.

PARK MAINTENANCE & ADMINISTRATION OFFICE

The western-most of two trees at this location has a hand embossed metal sign that reads, 'TORREY PINE PLANTED FROM SEED BY MRS. JAMES A. GREENWOOD PLEASE DON'T DISTURB." No date was included.

#81-1542, 1546 & 1550 OAK AVE.

SHIRLEY/DE LA MOTTE HOUSE – Twelve trees remaining from those planted in the 1920's by Anne de la Motte. She also planted a grove approximately 900 avocado trees on the property. Several of the Torrey pine trees have heron nests in the tops of their canopies.

#106-HOLIDAY PARK – (Playground area)

This evergreen conifer is considered the rarest native pine in the United States. It grows naturally in only two restricted locations, in Del Mar extending to the adjacent Torrey Pines State Reserve and on Santa Rosa Island located off the coast from Santa Barbara. In its natural habitat at the State Reserve many of the trees grow on rocky soil and exposed sandstone cliffs with little available water where they are shaped by ocean winds and storms. The exposed trees tend to be short and twisted into picturesque shapes by the forces of nature. In protected locations, or where it grows in deep fertile soil and is given supplemental watering, the tree tends to be more pyramidal in shape and can reach monumental proportions. The needles in bundles of 5s vary in color from a light gray-green to dark green and are 3"-4 ½" long. Other sources say 8"-13" long. (Perry pg. 247) The cones are roundish, 4"–6" long and a chocolate brown color. Several planted specimens in the state are over 100 years old.

The seeds of the Torrey pine were a food source for native people in the area and the long stiff needles were used for weaving baskets. The native people are reported to have used fire to control the growth of understory plants around the trees. The tree was "[N]amed for John Torrey, one of the most distinguished and best known American botanists of the nineteenth century." (McClintock pg. 201)

PITTOSPORUM TOBIRA TOBIRA (aka JAPANESE PITTOSPORUM, MOCK ORANGE) #17-2680 CARLSBAD BLVD. Japan & China

OLD STATE FORESTRY HEADQUARTERS/CALIFORNIA PARKS DEPT. – Located at northwest tip of the site adjacent to the sidewalk. This small evergreen tree is often seen as a shrub or pruned as a hedge. The creamy-white blossoms which appear on the branches in terminal clusters in the spring have a very strong fragrance of orange blossoms. Seeds produced after flowering are reddish in color and sticky to the touch. It has dark green, thick, leathery leaves with the edges turned under. It is related to *Hymenosporum flavum* – Sweetshade (Tree #76).

P. UNDULATUM VICTORIAN BOX (aka ORANGE PITTOSPORUM) #97-HOLIDAY PARK Australia, New Zealand, Africa & Asia

Located at the northwest corner of the park along Pio Pico Drive. An evergreen tree with a domed canopy and a slightly rough textured gray trunk. The glossy leaves with a wavy (undulating) edge are 4"-6" long and lance-shaped. The leaves vary in color from a light yellow-green to a deep green. Creamy-white blossoms with an orange-like fragrance appear in the spring as terminal clusters. The round fruit are a yellow-orange with sticky orange to reddish-black colored seeds. This tree is a large and very excellent specimen with a well shaped canopy.

Pinus torreyana – Torrey pine (Tree #11)
3001 Carlsbad Blvd. - Photo by Mark Wisniewski

Chorisia speciosa – floss silk tree (Tree #26)
421 Grand Ave. - Photo by Mark Wisniewski

CARLSBAD HERITAGE TREE LIST – 2002
DESCRIPTION OF SPECIES AND TREES

GENUS/SPECIES	COMMON NAME	LOCATION/ADDRESS	ORIGIN

PLATANUS X ACERIFOLIA LONDON PLANE TREE #101 HOLIDAY PARK England
(aka P. X hispanica)
This large deciduous tree with the patchy shedding cream-colored bark is located near the center of the park south of the bandstand. The large glossy leaves up to 10" across have 3 to 5 lobes and resemble maple leaves. There are woolly hairs along veins on the bottom of the leaves. The fall leaf color is an undistinguished dull yellowish-brown. The ball-like seed clusters either singly or in strings of two to four hang on throughout the winter and can be used for seasonal floral arrangements. This tree is planted as a street tree in many cities in Europe and the United States. In London, near where this hybrid originated, it has been widely planted for over 300 years. It is sometimes pruned annually in a rather severe style called pollarding that removes all the current growth of branches back to the point of origin. After years this results in enlarged swollen ends of the main branches giving the tree a very unusual look. The most well known example of this type of pruning in California is in Golden Gate Park at the Music Concourse in front of the bandstand.

P. RACEMOSA CALIFORNIA SYCAMORE California &
(aka ALISO in Spanish) #41-BUENA VISTA LAGOON San Diego Co.
This appears to be the only naturally occurring native tree in this Heritage Tree study area, every other tree in the area was planted. Located adjacent to Lt. Maxton Brown Park and State St.

#19-2605 CARLSBAD BLVD.
RED APPLE INN/ARMY NAVY ACADEMY – Located northeast of the Administration Building.

The California sycamore grows mainly in the Coast Ranges and foothills around the state and the county, usually found near water or in riparian areas. There are surprisingly very few examples of this fine deciduous tree planted in the study area. The leaves are maple-like with 3 to 5 deeply cut lobes. The leaves can vary from 4"–12" long by 5" to as much as 18" wide. The leaves are a light green color on top and paler on the bottom which is covered with yellowish hairs that can irritate skin. They turn a pale brown late in the summer. The trunk peels in pieces like a jigsaw puzzle revealing colors of gray, white, tan, brown and green. The trunk can be massive and often multi-trunked with branches that are usually twisted, contorted and grow in a zig-zag pattern. This branching patter is the result of branch tip die-back due to a fungal disease called anthracnose. Please note that this plant disease has no relation to the animal disease called anthrax which has been much in the news lately. "To many, this is a signature species of western landscapes." (Perry pg. 249)

PODOCARPUS GRACILIOR FERN PINE #68-3437 HIGHLAND DR. East Africa
(aka P. ELONGATUS, (aka AFRICAN FERN PINE)
AFROCARPUS G., NAGEIA FALCATUS)
There are two large well-shaped round headed evergreen trees at this location. The leaves are 1"-2" long and ½" wide and vary in color from a grayish-green to a blush-green. The young leaves are a lighter and sometimes brighter hue. The gray trunk tends to be straight and has flaking patches of bark. The flowers on female trees are inconspicuous. There is much variability in shape and leaf size of plants that are grown from seed and plants grown from cuttings. A very clean tree, except mature female trees may produce litter from fruits.

PSIDIUM CATTLEIANUM STRAWBERRY GUAVA #61-3250 ROOSEVELT ST. Brazil
This low-branched spreading evergreen tree is located near the southeast corner of the house in the backyard and is best seen from the alley. The smooth bark is reddish to gray brown in color. The new leaves are bronze turning to a glossy green and becoming leathery as they mature. The white flowers about 1" across occur throughout the year and develop into rounded berry-like edible fruits about 1" wide, dark red in color to nearly black when mature. The flesh is white and has a sweet-tart flavor.

Eucalyptus globulus – blue gum (Tree #9)
Cohn/Royal Palms/Fidel's
3003 Carlsbad Blvd. - Photo by Mark Wisniewski

CARLSBAD HERITAGE TREE LIST – 2002
DESCRIPTION OF SPECIES AND TREES

GENUS/SPECIES	COMMON NAME	LOCATION/ADDRESS	ORIGIN

QUERCUS AGRIFOLA COAST LIVE OAK #107 HOLIDAY PARK California & San Diego Co.

An evergreen native tree species located along the east side of the park. This is one of a very few native oaks growing in the study area. The species is widely distributed throughout the state and its range extends south into Baja, California. The trunks of the trees are gray and smooth when young developing a rougher texture as they age. Old trees can grow to massive size with heavy wide spreading branches. Many Native American tribes used the acorns as a staple food in their diets. "Early Spanish explorers in California found and wrote about the coast live oaks, which they called e*ncina*…Jepson (1909) pointed out that the location of the chain of Franciscan missions 'corresponded closely' with the distribution of coast live oak." (McClintock pg. 176) The wood was used for lumber in building, in charcoal production and the bark was used for the tanning of cattle hides. Many trees in natural stands have been cut for use as firewood.

SCHEFFLERA ACTINOPHYLLA OCTOPUS TREE #36-2865 JEFFERSON ST. Australia
(aka BRASSAIA ACTINOPHYLLA) (aka QUEENSLAND UMBRELLA TREE)

This slender evergreen tree with the open canopy is located against the north side of the house. "The 'umbrella' of the common name comes from the foliage form: the long-stalked, glossy bright green leaves are divided into 7-16 large (to 1-ft.-long) leaflets that radiate outward like ribs of an umbrella. Foliage grows in tiers. 'Octopus' refers to showy flower heads: narrow, raylike structures to 3 ft. long, set all along their length with little blossoms, radiate from a central point. Flowers age from greenish yellow to pink to dark red." (Brenzel pg. 601) This tree has a very tropical look and feel in the landscape.

SCHINUS MOLLE CALIFORNIA PEPPER TREE #3-390 OAK AVE. Peruvian Andes

Located on Washington St. with large swollen trunk and rough textured red-brown bark.

#89-1139 OAK AVE.

Located in front yard near the northeast corner of the house.

This evergreen tree has a lacy delicate canopy with weeping or pendulous branches. The bright green foliage is almost feathery in appearance. Tiny yellowish summer flowers give way to cluster of rose-colored berries in the fall and winter. The berries are not true peppers. Since its first introduction into California at Mission San Luis Rey in the 1830's the tree has become so widespread in the state that many think it is a native tree. One of the first trees planted from seed at Mission San Luis Rey is still alive and is celebrated each year with "Pepper Tree Day." Some specimens get quite massive with age and develop gnarled trunks and branches. In many locations, except the desert, it can survive with no supplemental watering. Some plants have escaped cultivation and have become established along watercourses.

S. POLYGAMOUS PERUVIAN PEPPER #110 HOLIDAY PARK Peru

Located east of the bandstand and just east of the *Liquidambar styraciflua* – Tree #109. The deep green leaves are linear and about 1" long on this evergreen tree with textured gray bark. Clusters of yellow-green summer flowers are inconspicuous and are followed by purple-black berries. (Perry pg. 283)

S. TEREBINTHIFOLIUS BRAZILIAN PEPPER #45-645 CARLSBAD VILLAGE DR. Brazil

This is a street tree located on Roosevelt St.

#92-1103 OAK AVE.

This tree is located along the road and just east of the driveway. The twisted branches form a maze of a canopy.

This evergreen tree has leaves that are coarser, larger and darker green that *S. molle.* The tree produces an abundant crop of showy bright red berries in the fall. The berries are sometimes dried and sold as pink peppercorns. They can cause gastric distress if eaten in quantity. (Brenzel pg. 602) Because of the heavy berry production, the plant self-seeds readily and has become an invasive pest in some locations.

Dodonaea viscosa – hop bush (Tree #28)
2956 Roosevelt St. #3. - Photo by Mark Wisniewski

CARLSBAD HERITAGE TREE LIST – 2002
DESCRIPTION OF SPECIES AND TREES

GENUS/SPECIES	COMMON NAME	LOCATION/ADDRESS	ORIGIN

SEQUOIA SEMPERVIRENS COAST REDWOOD #65-1284 BASSWOOD AVE. Coastal Central California - Oregon

The tree at this location is the very tall conifer with the cone-shaped canopy. There are no lower branches on the red brown trunk with fibrous bark. This species produces some of the tallest trees in the world reaching heights of up to 367 feet. They are also some of the oldest trees, many living for over 1,000 years and some for as long as 2,200 years. This is one of a few conifers that can reproduce vegetatively by sprouting from the stump or root crown. (McClintock pg. 184) The main branches usually grow straight out horizontally from the trunk and then curve up at the tips. This species is fast growing in its native habitat. A young tree can grow 3'–5' a year and reach 70'–90' in 25 years. The wood is known for its high quality and durability. The wood is resistant to insects and decay. It is easily worked and "Yes" the wood is red.

Even though this is an evergreen tree it is normal for the oldest leaves, and some short twigs, to change from dark green to yellow, then brown and then drop off, usually in late summer. Small cones up to an inch long are produced at the tips of some branches. They usually drop the year following initial growth, but some may persist in the tree for up to ten years. The bark is from 2"-8" thick with high amounts of tannin and is difficult to burn. (Huntington pgs. 44, 48, 50) Compare this tree to its deciduous relative from China, *Metasequoia glyptostroboides* - dawn redwood (Tree #108) in Holiday Park.

STENOCARPUS SINUATUS FIREWHEEL TREE #1-ROTARY PARK New South Wales, Australia

There are many examples of this species planted in the park. The largest tree is part of a grove planted to the southeast of the gazebo. This is a slow growing evergreen tree. The large deep green shiny leaves are leathery and irregularly lobed and can be up to 12" long. They are a distinctive identifying characteristic. Sometimes on older trees the leaves are smaller and lance-shaped without lobes. The flowers are unusual in many respects. The individual flowers are tiny and yellow produced at the ends of red stalks 1" long. They are arranged in clusters form a central point like the spokes of a wheel, giving them their common name. Fall is usually the peak flowering time, but flowers may appear at any time. The flowers sometimes grow right on the bark along the trunk. Trees with a profusion of flowers can be spectacular. When the park was originally designed by local landscape architect Ralph Wrisley over 40 years ago he wasn't aware that the flower of this tree is the basis for the symbol of Rotary International. In Australia the wood has been used for cabinet work and veneers and where abundant for general building purposes. It is close-grained, moderately hard and durable. (McClintock pg. 190)

SYAGRUS ROMANZOFFIANUM QUEEN PALM #14-2978 CARLSBAD BLVD. Central Brazil
(ARECASTRUM R., COCOS PLUMOSA) (aka COCO PALM)
SCHUTTE/TWIN INNS/NEIMAN'S – 1 of 15 trees
#86-3081 HIGHLAND DR.

SHAW HOUSE – 12 trees remaining in the back (west side) of the house, part of an original collection of rare palms. This tall usually slender tree has a smooth gray straight trunk. The feather–like fronds are arching and graceful. They are a glossy bright green to a gray-green in color and grow 10'-15' long. "Small cream to yellow flowers turn into showy hanging clusters of green dates on 3' stalks. Fruits ripen in June and turn orange before falling." (Mahoney, et. al. pg. 161)

SYZYGIUM PANICULATUM BRUSH CHERRY #77-1144 PINE AVE. Australia
(aka EUGENIA MYRTIFOLIA, E. PANICULATA) (aka AUSTRALIAN BRUSH CHERRY)

There are two upright trees at this location. Young leaves are a bronzy-red color while older leaves are dark green, glossy and sometimes tinged with bronze. Small creamy white flowers in loose terminal clusters appear in summer. They are followed by ¾" long edible rosy-purple fruit. The raw fruit has an insipid taste, but is good when made into jelly.

Erythrina caffra – coral tree (Tree #27)
507 Grand Ave. - Photo by Mark Wisniewski

Tipuana tipu – tipu tree (Tree #29)
2954 Madison St. from the alley - Photo by Mark Wisniewski

CARLSBAD HERITAGE TREE LIST – 2002
DESCRIPTION OF SPECIES AND TREES

GENUS/SPECIES	COMMON NAME	LOCATION/ADDRESS	ORIGIN

TECOMA STANS YELLOW BELLS #48-3048 JEFFERSON ST. Southern U.S. to
(aka STENOLOBIUM STANS) (aka YELLOW TRUMPET FLOWER, YELLOW ELDER) Guatemala
HESS HOUSE – A small multi-trunked tree located near the sidewalk at the north end of the lot. Distinguished by the large clusters of bright yellow trumpet-shaped flowers appearing from late spring to early winter.

TIPUANA TIPU TIPU TREE #29-2945 MADISON ST. Argentina, Bolivia
(aka ROSEWOOD, PRIDE OF BOLIVIA) & Southern Brazil
This tree is best appreciated from the alley. A great specimen that covers over a third of the lot and dwarfs the house. This is such a marvelous tree with wide-spreading branches because it appears to have been pruned very little over its lifetime. The owners of this special tree must have cared for it deeply to allow it the freedom to grow uninhibited. The species typically has an umbrella shaped flattened crown that is wider than it is high. The foliage is light green in color and is semi-evergreen to deciduous. The tree may be out of leaf from January to May. "Blooms from late spring to early summer, bearing clusters of apricot to yellow, sweet pea-shaped flowers; 2 ½" seed pods follow the flowers." (Brenzel pg. 634) The San Diego nursery pioneer and horticulturalist Kate Sessions introduced the tree into the nursery trade and helped to popularize its use.

ULMUS PARVIFOLIA CHINESE ELM #37-2801 JEFFERSON ST. China, Korea &
(aka CHINESE EVERGREEN ELM) Japan
The tree located north of the driveway was recently topped, cutting the large spreading canopy back to branch stubs. The canopy before the topping was over 45'-60' tall and had a spread of between 60'-75'. The natural canopy had strong arching look combined with some pendulous down-hanging smaller braches. The species is variable from semi-evergreen to deciduous depending on the winter temperatures and the individual tree's heredity. The bark on the trunk peels in patches creating a mottled pattern. Profuse fall production of tan colored fruit in clusters. This tree was left on the Heritage Tree list despite the topping because of its age and the large size of its remaining trunk and limb stubs. This is an example of how not to prune a valuable mature tree.

WASHINGTONIA FILIFERA CALIFORNIA #52-3096 HARDING ST. California &
(aka BRAHEA FILAMENTOSA, FAN PALM Arizona
B. FILIFERA, PRITCHARDIA FILAMENTOSA, P. FILIFERA)
Two fan palms with stout trunks located off the alley. Unpruned trees develop a shaggy thatch skirt of retained dead fronds and flower clusters surrounding the trunk. The leaves, 3'-6' across, are a light green with a long stalk and stand apart in the open canopy. "Hundreds of fragrant, tiny, creamy-white, vase shaped flowers in tight clusters all along the branches of 12-foot-long flower stalks. They somewhat resemble corn tassels spreading out in the midst of the crown…Ovoid black fruits hanging in large clusters from the stalk. They have a thin skin and a sugary, edible flesh and were used by the Indians for food." (Maino pg. 208)

W. ROBUSTA MEXICAN FAN PALM #4-379 PINE AVE. Southern California
(aka W. GRACILIS, W. SONORAE) & Mexico
A group of 4 very tall trees along the sidewalk. #25-2855 CARLSBAD BLVD.
CARLSBAD MINERAL SPRINGS HOTEL/CARLSBAD-BY-THE-SEA – 12 tall trees growing around the grounds.
These trees have slender trunks that can reach 100' tall. It is often "slightly curved or bent and much slimmer than that of *W. filifera*. Head of bright green foliage is more compact; leafstalks are shorter, with a red streak on the undersides." (Brenzel pg. 651) Unpruned trunks develop a thatch skirt on the trunk as well. Removed fronds leave a base attached to the trunk. The frond bases have been removed from these trees by a process called "skinning" which leaves a smooth bare trunk. The summer flowers are also similar to *W. filifera* spreading out horizontally from the fronds in the crown. The fruit is small black and round also like the California fan palm was used by the Indians for food (Maino pg. 209)

1916. *Eucalyptus cladocalyx* – sugar gum (Tree #2)
Elm Ave. (Carlsbad Village Dr.) looking west – Carlsbad Library Photo

2001. *Eucalyptus cladocalyx* – sugar gum (Tree #2)
395 Carlsbad Village Dr. - Photo by Mark Wisniewski

CARLSBAD HERITAGE TREE LIST – 2002
DESCRIPTION OF SPECIES AND TREES

GENUS/SPECIES	COMMON NAME	LOCATION/ADDRESS	ORIGIN
YUCCA GLORIOSA	SPANISH DAGGER (aka SOFT-TIP YUCCA)	#34-2879 JEFFERSON ST.	Southeastern U.S.

This tree has a large swollen base and multiple gray trunks. The leaves vary from green to dark green and are 1'-2' long and have been described by the two different sources referred to as either "sharply pointed" or "soft tipped". This discrepancy also results in the apparent conflict between the two common names. "large clusters of showy white flowers occur on 2-3 ft. spikes in spring to summer." (Perry pg. 300)

"Plants sold under this name in the West are most likely a form of *Y. elephantipes* or a hybrid between that form and *Y. gloriosa."* (Brenzel pgs. 654-655)

CARLSBAD HERITAGE TREE LIST – 2002
OTHER TREES AND PLANTS OF UNUSUAL NOTE OR SPECIAL INTEREST IN THE STUDY AREA.

GENUS/SPECIES	COMMON NAME	LOCATION/ADDRESS	ORIGIN

BOUGAINVILLEA BOUGAINVILLEA #A-2550 CARLSBAD BLVD. South America
Located south of Scandia Motel and along the edge of the athletic field of the Army Navy Academy is a huge sprawling vine that is spectacular in full bloom.

CERATONIA SILIQUA CAROB (aka ST. JOHNS BREAD) #B-2810 MADISON ST. Mediterranean Region
This tree was planted in 1955 by Houston Tucker, who still lives on the property. He built the tree house in the branches and has taught countless numbers of neighborhood children how to climb and to appreciate trees. Refer to *Certonia siliqua* – Tree #44 for additional information.

EUPHORBIA TIRUCALLI PENCIL TREE (aka MILK BUSH, PENCIL BUSH) #C-3037 JEFFERSON ST. Africa
"Fast growing to possible 30' tall and 6' wide, usually much smaller. Single or multiple trunks support tangle of light green, pencil-thick succulent branches with tiny leaves present only on actively growing tips. Flowers are unimportant…Be sure to keep milky sap away from eyes, as it can cause severe damage." (Brenzel pg. 345)

FICUS RELIGIOSA PEEPPUL (aka BO-TREE) #D-2642 MADISON ST. India & Southeast
Located in the front yard, the tree is about 10' tall with pale green leaves that can vary from 4" up to 7" in size. The leaves move easily in the slightest breeze giving the tree a fluttering appearance. The tree is briefly deciduous with leaves dropping completely in late spring to early summer. This is the tree that Buddha was said to have meditated under while seeking enlightenment.

PALMS VARIOUS SPECIES #E-3369 ROOSEVELT ST. Various locations
This address has quite an interesting collection of palm trees of numerous species. Perhaps some of these will become the Heritage Trees of the future.

PANDANUS TECTORIUS THATCH SCREWPINE (aka PANDANUS PALM) #F-1315 PINE AVE. Tahiti
This very unusual plant is located east of the driveway. The tree is currently about 5' tall and has palm-like leaves that wrap around the trunk in spirals giving the impression of the fluted ridges on a screw. "The fruits and foliage resemble those of pineapples…the tough pliable leaves of screw-pines are plaited into mats, screens, fans, sandals, hats and other articles. From the fragrant flowers perfumes and native medicines are prepared. The fruits of some kinds are edible." (Everett pgs. 67-68)

Eucalyptus cladocalyx – sugar gum (Tree #93)
This tree is slowly “eating” a reflector sign that was attached to the tree. Someday it will disappear completely only to be rediscovered by an unfortunate chainsaw operator when the tree dies and is removed.
Holiday Park - Photo by Mark Wisniewski

SUMMARY

Many interesting pieces of information were discovered during the almost two years that this study has encompassed. The following was extracted from the inventory data and listing of 110 candidates for Heritage Tree status. The observations are presented in no particular hierarchy of importance.

Only one tree in the entire study area, a *Platanus racemosa* – California sycamore, Tree #41, growing along the edge of Buena Vista Lagoon, appears to be a naturally occurring native tree. Every other tree in the area was planted. What was surprising was that there were no identifiable remnants of stands of native trees. That may have to do with topography more than anything else. The land grades gently down from the high ridge east of Highland Drive to the Pacific Ocean. There is a mesa above the beach with a moderate bluff. There are no creeks, streams or natural drainage courses in the study area and all the land at one time has either been tilled, planted or developed. If there were any native trees in the area they were removed.

It was also surprising that there were very few trees native to the immediate area planted as ornamentals even though these same trees are highly valued and even revered in other communities in the state. Only three local native trees made the list. Two *P. racemosa* – California sycamore, Trees #41 and #19 located on the former grounds of Apple Inn now the Army Navy Academy, and a *Quercus agrifolia* – coast live oak, Tree #017 in Holiday Park.

There are numerous *Pinus torreyana* – Torrey pines in the area, several of very significant size with heights and canopy spreads of 75’ or more. Seven individual locations have been noted. Some of these locations have multiple trees such as Tree #81 site, which has 12 trees remaining from plantings made by Anne de la Motte in the 1920’s. the largest Torrey pine is Tree #69 which is estimated to be between 100’-120’ tall with a large spreading canopy of almost 120’ and a massive trunk. This may be one of the largest Torrey Pines in the state. This is also one of the tallest trees in the study, if not the tallest. Two of the trees, Trees #78 located in front of the Park Maintenance and Administration Office, are known to have been planted from seed.

All of the other trees on the proposed Heritage Tree list do not grow as natives in San Diego County. The following is a listing of their place of origin. If they are native to several countries or regions only the most well known was used for this list and they were not listed twice. For additional informational on place of origin refer to the listing and description of each species:
6 - native to other areas of California
6 - native to other areas of the United States
5 - native to Mexico
4 - native to Brazil

2- native to Peru
1- native to Guatemala
2- native to other areas of South America
4- native to the Mediterranean Region
1- was hybridized in England
2- native to the Canary Islands
1- native to Madagascar
3- native to other areas of Africa
6- native to China
1- native to Japan
1- native to India
1- native to the Malay peninsula.

This is a total of 49 species from these locations.

There are 24 additional trees that are native to Australia, and there is 1 additional tree that is native to New Zealand. This is a total of 25 species from this region alone. Over one-third of all the listed species in this study come from this one region.

There are a total of 74 species and 54 genera represented in this study. This represents a very wide range of diversity of tree specimens from around the world located in a relatively small geographic area. This could almost be considered a mini-arboretum collection spread out over the Old Village Area. One of the characteristics that these foreign trees share is that they either come from a similar climatic zone or region or they are adaptable outside of their preferred climatic zone.

There are 16 trees in the height range of 75’ and taller. In addition to the Torrey pines already mentioned, these are mostly various species of *Eucalyptus* including *Eucalyptus cladocalyx* – sugar gum, Trees #16, 30, 32, 33, 63, 93 & 95, *E. globulus* – blue gum, Trees #9 & 31, and *E. viminalis* – manna gum, Tree #105. Some of the taller palms include *P. canariensis* – Canary Island date palms, Trees #12 & 80 and *Washingtonia robusta* – Mexican fan palms, Trees #4 & 25. Refer to Appendix C for a complete listing of this and all of the other size, condition, vigor and ownership data for each tree.

There are 16 trees with canopy spreads in the range of 75’ and wider. These include several *Eucalyptus* species including *E. cladocalyx* – sugar gum, Trees #16, 33, 93, 95 & 96, *E. viminalis* – manna gum, Tree #105, *P. racemosa* – California sycamore, Tree #41 and *Ficus macrophylla* – Moreton Bay fig Trees #10 & 20.

There are 22 trees with trunk diameters in the range of 48” and greater. Among the very largest are *F. macrophylla* – Moreton Bay fig, Tree #20, *E. cladcalyx* – sugar gum, Tree #16 which has an 8’ diameter trunk and a swollen base that measures 14’ at ground level and *E. globulus* – blue gum, Tree #9 which has a 9’ diameter trunk.

Of the 110 trees listed 109 are actively growing and only 1 is showing signs of decline. The majority of the trees, 60, are rated as being in good condition, 45 are in fair condition and only 5 are in poor condition. This bodes well for their future longevity. Many of the trees would have received a higher condition rating had they not been subjected to poor pruning practices over the years. The condition rating is derived from assigning a numerical score to the following components: trunk, crown (which includes the major branches), canopy (which includes the smaller branches and foliage) and pest problems. These are then calculated to obtain a numerical score that relates to a condition rating category.

The ownership of the trees is equally divided between publicly owned and controlled trees (city, state or federal government) and privately owned and controlled trees. In some cases it was not possible to determine from visual field observation if a tree was city owned or privately owned. This usually occurs when trees appear to be on or near property or easement lines. These questionable trees for the most part appear to be currently maintained by the private property owners.

The ownership of the trees is as follows:

City	50
City ?	3
Private	53
Private ?	2
State	1
Federal	1

Ownership of remaining trees
September 30, 2007 Addendum:

45	City
44	Private
1	Federal
2	North County Transit District

Several of these Heritage Tree candidates are considered rare or endangered in their native habitat. These include *C. macrocarpa* – Monterey cypress which is considered as the rarest tree in the state of California. “Its distribution is the most restricted of any California tree and perhaps of any conifer in the world… Monterey cypress is listed in the California Native Plant Society’s *Inventory* as endangered in part of its range.” (McClintock pg. 75)

E. globulus – blue gum is so widely planted in California that some people consider it a native. In many areas it has escaped and become naturalized so that it is now considered an invasive pest. In its natural range, it has a very limited distribution limited to two small areas in Australia and one larger area in Tasmania. (McClintock pg. 89)

E. ficifolia – red-flowering gum, "[I]s limited to a small area on the southwestern corner of Western Australia from near sea level to about 500 feet, and is so rare that it is included in a list of endangered Australian eucalyptus. Fortunately, most of the trees are within a national park and therefore protected." (McClintock pg. 88)

Other trees are extremely limited in their native range or numbers in the wild such as *P. torreyana*. "Torrey pine, the rarest of the California's pines, has one of the most limited distributions in the genus. It occurs in only two small areas in Southern California. One population is on the coastal mainland, within the city of Del Mar and to the immediate south in Torrey Pines State Reserve.

Scattered over a few square miles to the north and south of Soledad Valley, this population was estimated by the California Department of Parks and Recreation in 1975 to include about 3,400 mature trees. The second population, to the northwest on Santa Rosa Island offshore from Santa Barbara County, covers less than one square mile. It includes abut 1,000 mature trees, but has a higher proportion of young trees than the mainland population." (McClintock pg. 160)

One of the most fascinating trees on the list is the *Metasequoia glyptostroboides* – dawn redwood of China, Tree #108, growing in Holiday Park. This is a deciduous tree that is closely related to both species of evergreen California redwoods, the coast redwood and the big tree or giant sequoia of the western Sierra Nevada.

"Numerous kinds of trees living today have persisted with little or no change since remote geological times and are well represented by ancient fossils. But the term 'living fossil' seems to be applied chiefly to *Metasequoia* because it was described and named from fossil records before it was known to exist in present world flora. The first living specimens – three of them – were discovered by a Chinese forester in 1941 not far from Chungking, but it was not until 1946 that the tree was identified as of a genus previously unknown in a living state." (Everett pg. 42)

Seed was first sent to the United States in 1946 to the Arnold Arboretum at Harvard University and then was distributed to other universities, parks, botanical gardens and some individuals. One tree that still existed in 1996 in the remote village of Madaoqui, China was revered as the home of a god. This tree was estimated to be over 450 years old. Many trees have been planted as street trees both in Madaoqi and throughout China. (McClintock pgs. 130-131)

> *I rank arboriculture as one of the fine arts. I have studied it in all its various schools—the palms of Africa, the cypresses of Mexico, the banyans and peepals of India, the birches of Sweden, the elms of New England. In my mind there is a gallery of masterpieces, which I should not be afraid to place beside those of the Vatican or the Louvre.*
>
> Bayard Taylor, "At Home and Abroad"

2001. *Eucalyptus cladocalyx* – sugar gum (Tree #2)
Note: The enlarged swollen base of this tree measures 10’ in diameter. Tourists often take photos of each other sitting on the tree’s base. The canopy was severely over-pruned and drastically reduced in size. This is injurious to any tree, particularly an old mature tree like this one.
395 Carlsbad Village Dr. - Photo by Mark Wisniewski

MANAGEMENT RECOMMENDATIONS

In managing and maintaining old mature trees such as are included on this list of candidates for Heritage Tree status, less is usually more. At least less is usually better. Less damage, less damaging pruning, less hardscape, less root damage, less turf, less compaction are all better for the tree. These practices properly done also usually mean less cost over the life of the tree.

There are some areas of mature tree care where a little more is better: more knowledge by the people charged with caring for the trees; more diligence in the performance of regular inspections; more respect given to the trees; more mulch applied (within reasonable limits); more soil surface area exposed and more protection provided.

There are also elements that are necessary to promote tree growth and health that are required in moderation. Usually the trees, if they are well adapted to an area, can obtain these on their own. Sometimes these need to be supplied by people. These requirements include air, water, and nutrients. These three growth requirements are obtained from the atmosphere and from the soil by the roots.

Some trees in parks or in estates located in cities and in countries around the world have been maintained and continue to grow and even flourish for four to five hundred years. Some trees such as the *Pinus aristata* – bristlecone pine in the White Mountains in California have survived for over 4,600 years on rocky, wind-swept mountains at elevations of over 11,000 feet above sea level without, or more likely because, they have not had to contend with human intervention. How do some trees survive for so long when many estimates of tree longevity for new urban street plantings range from 7 to 13 years?

First the trees need to be well adapted to the area climatically. The trees need to be able to survive the maximum and minimum temperatures as well as the amount, frequency and timing of rainfall (or snowfall in some less temperate climates). The trees need sufficient area to grow, both above and below ground. In many forest settings trees can and do grow close together. Large specimen trees, like the majority of the ones in this study, benefit from additional open space to spread out both their canopies and root systems. That is one reason that there are so many Heritage Trees in Holiday Park.

LESS DAMAGE

Less damage starts with quality planting stock that is properly planted. Less damage means not ripping limbs or roots out of trees with construction equipment. It also means no injury from lawn mowers and weed eaters. It means not attaching signs or electrical wires to trees (see photograph pg. 47).

Ulmus parvifolia – Chinese evergreen elm (Tree #37)
This tree was severely “topped” removing the majority of its branching structure.
2801 Roosevelt St. - Photo by Mark Wisniewski

LESS DAMAGING PRUNING

Less damage means not over-pruning trees by removing large or even small branches without a demonstrated necessity. The destructive and damaging process of “topping,” where large limbs are cut back to stubs while removing large portions of both the branch structure and the canopy of the tree, should be made illegal for all publicly-owned trees in the City (see photographs pgs. 52 & 54).

The State of California has passed legislation that recognizes the problems associated with this costly and destructive practice and encourages every public agency in the state, including cities, to follow accepted pruning standards (refer to Appendix J).

The standards currently accepted would include the “Best Management Practices – Tree Pruning” published by the International Society of Arboriculture (refer to Appendix K) and the “American National Standards for Tree Care Operations, ANSI A300 (Part 1)-2001 Pruning” (refer to Appendix L).

This is not new knowledge. John Davey, the founder of Davey – a tree service company, wrote in 1907:

“Few, if any, greater misfortunes have befallen America, in the last quarter of a century, than the coming of what are known as professional “Tree men” in every city and many towns… But in all their ignorant and nefarious frauds, nothing equals their (what ought to be) “criminal” work of cutting away the tops of trees. The old State of Pennsylvania has apparently suffered as much as any from these depredations. Harrisburg, the capital, has been almost completely denuded by them. Substantially all the trees on the streets have been ruined… Tens of thousands of what might have been good trees have been ruined in Philadelphia by these tree vandals, resulting in a lessening of real estate values to the extent of millions of dollars.” (Davey pgs. 33 & 34)

Another destructive pruning practice is referred to as “lion’s tailing.” This is the removal of the majority (or all) of the interior foliage and small branches of the tree leaving the remaining foliage and weight concentrated in a tuft, like a “lion’s tail,” at the ends of the branches. The excess removal of foliage along the branch also inhibits proper branch development and taper, leading to a loss of strength and contributes to branch failures (see photograph pg. 52).

Less damage also means not over-pruning trees by removing too much foliage throughout the canopy. The leaves (along with green branches and green bark) are the only means the tree has to produce life-sustaining energy for the proper functioning of its physiological and metabolic processes. Removing too much foliage requires the tree to expend stored energy reserves to replace the missing foliage in an attempt to balance its energy expenditures with its energy production. If energy expenditures continually exceed energy production, reserves become depleted over time weakening the tree (see photograph pg. 52).

Cupressus macrocarpa – Monterey cypress (Tree #5)
Note light-colored scar at the end of the branch on lower right. Trench on left side of tree under the canopy was aligned approximately with the second from the left yellow diamond-shaped warning sign.
357 Chestnut Ave. - Photo by Mark Wisniewski

Over-pruning on a mature tree, depending on its health, may mean removing 10% or even less of its live foliage at any one time or during the course of a year. It is especially difficult for large mature trees to recover from this type of stress, especially if this is done repeatedly. Over-pruning can cause trees to decline and die prematurely.

Some of the Heritage Trees that look the best are privately owned and appear to have received little or no pruning over the years and show little need for any substantial pruning at this time (see photographs pgs. 29, 38, 51 & 69). Other trees, including some City-maintained trees, have been subjected to substantial over-pruning and have been damaged by this work (see photograph pg. 52). This type of poor pruning also sets a bad example to the public. They might erroneously assume that this is what proper pruning looks like because they saw it on a City-maintained tree. These trees will require higher frequency of inspections and pruning in the future to prevent and/or correct potentially hazardous conditions from developing with weakly attached branches growing from the cut stubs.

LESS HARDSCAPE

Less hardscape (sidewalks, curbs and pavement) and other restraints allow normal tree growth and expansion to occur, without the potential for the tree to damage the adjacent hardscape. Most trees grow to fairly well known predictable sizes. They should be planted in locations to accommodate their mature size. Many of the Heritage Trees were planted over a century ago as street trees when this fact may not have been well appreciated. But they were also planted before wide paved roads and concrete sidewalks were constructed. Many of the trees have had to suffer the loss of the open areas of soil where they were originally planted. It is remarkable that so many have survived in spite of having been damaged from the “improvements” being constructed around them.

Often times when tree roots damage hardscape the trees are considered the guilty party and sentenced to death by removal. The true guilty parties are the ones who designed or constrained the tree in too small of an area for normal growth and development to occur. These individuals are seldom held accountable for their actions. Many alternative solutions to tree removal are available.

LESS ROOT DAMAGE

In addition to the installation of hardscape which we can see, many of these Heritage Trees have also been subjected to underground damage to their root systems which we can’t see. Underground utilities that are commonly installed can include any or all of the following: conduits or pipes for water, sewer, gas, electrical, cable TV, phone and other communication lines, irrigation pipes and drainage systems including large storm drains. There are tools and methods that can be used for underground work that are not damaging to tree roots.

Cupressus macrocarpa – Monterey cypress (Tree #5)
Wide and deep trenches were excavated on two (possibly 3) sides of this tree under the canopy (dripline). Very few roots were observed along the side of the trenches nearest the tree. The largest roots observed were approximately 1.5” in diameter. This tree must have an extremely deep root system.
357 Chestnut Ave. - Photo by Mark Wisniewski

Within in the last few months the *Cupressus macrocarpa* – Monterey cypress (Tree #5) has had extensive underground trenching and work performed under at least two sides of its canopy. Some limbs appear to have been ripped out of the tree by construction equipment working under the canopy. Surprisingly I observed very few large roots damaged in the excavations around this tree, but numerous smaller roots were damaged and the soil around the tree was compacted from heavy equipment operations (see photographs pgs. 56, 58 & 60).

Bob Bichowsky, a well-known arborist, made some similar observations and was quoted in the Blade – Citizen in 07/24/91 concerning the *Eucalyptus cladocalyx* – sugar gum (Tree #63), “I was amazed to find that the roots are much deeper than they are on 95 percent of the trees I look at. If any tree will survive, this will be the one to do it.” (see photograph pg. 22)

It appears that the soil throughout the study area is a deep sandy alluvial type that either has been eroded from the ridge where Highland Drive is located and/or is the remains of an ancient beach terrace. In either case the soil has been deposited over millennia and gently slopes towards the ocean. It is understandable that farmers and nurserymen would pick the best soils for growing their crops and orchards. The soil appears to be the secret why these Heritage Trees grew so well and why so many of them are still flourishing today despite all of the “improvements” that have been installed around them.

The Old Village part of the City was developed on this deep natural soil which has not been greatly altered as is commonly done in new projects that are developed today. Contemporary construction practices usually involve the moving of tremendous amounts of soil and compacting the soil with heavy equipment to high densities by removing air spaces. Any loose soils, especially those with a high organic content, are usually disposed of as being unsuitable for building purposes.

LESS TURF

Less turf allows the tree better access to water and minerals. Turf or grass is much more aggressive than trees are at removing these necessary requirements for life, especially from the top 6”-12” of soil. Less turf means that the turf is kept further away from the trunk and any buttress or surface roots of the tree. This not only means less potential damage to the trees from mowing equipment, but also less damage to mowing equipment from hitting exposed surface roots.

Keeping the turf away from the trunk also means less potential damage to tree trunk from the high-speed string trimmers (commonly referred to as “weed eaters” or “weed whackers”) cutting down that last little bit of grass up against the tree trunks that the mowers can’t get to. String trimmers hitting the trunks of trees can instantly damage the cambium layer of the tree and can girdle and even kill trees, particularly those that have thin bark.

Cupressus macrocarpa – Monterey cypress (Tree #5)
Note light-colored scar at the end of the branch near middle of the photo. This branch appears to have been recently damaged by construction equipment working under the canopy of the.
357 Chestnut Ave. - Photo by Mark Wisniewski

LESS COMPACTION

Less turf can also mean more room for surface applications of mulch, such as coarsely ground or chipped tree prunings. Organic mulch as it breaks down adds a small amount of minerals and nutrients to the soil. Mulch also allows greater biological activity in the soil from earthworms and soil micro-organisms. This in turn provides for better soil aeration which leads to better soil gas exchange and better (deeper and quicker) water absorption and penetration, with less surface runoff and fewer weeds as well.

Mulch also acts as a “shock absorber” preventing the compaction of soils, especially from foot traffic under the tree canopies. Many of the Heritage Trees in Holiday Park have severe compaction over their root systems, some of which are exposed on the surface of the soil.

LESS MONEY

Less money is usually required to be spent on maintenance over the life of a tree if it is given adequate growing space, mulched on a regular ongoing basis, is not damaged by construction practices and the tree is provided periodic inspection and pruning on a cycle that is appropriate for its age and species. For trees that have been damaged, a higher level and frequency of inspections and proper pruning and management are warranted.

RECOMMENDATIONS SUMMARY

The following are recommendations to provide for the health, safety and longevity of the City’s Heritage Trees. These recommendations should be adopted by the City Council as mandatory for all City owned Heritage Trees and are advisory only recommendations for privately-owned and non-City owned public Heritage Trees.

1. City Arborist to provide copies of this report to each City employee in charge of managing a Heritage Tree and to every property owner of a Heritage Tree located on private property. In some locations it is unclear if a tree is publicly or privately owned and who is responsible for its care. These tree locations should be clarified by the City Arborist.

2. Have all public Heritage Trees inspected at least annually by a qualified certified arborist who shall provide written recommendations for any required maintenance including pruning. The reports are to be kept in a permanent file for each tree for future reference along with a record of any work performed on the tree and the result of that work.

3. Remove any signs or wires that have been attached to any publicly-owned Heritage Tree, if this can be done without damaging the tree any further. Do not remove any signs of historic significance attached to the tree.

4. Adopt a City policy or regulation prohibiting the “topping” of any public tree.

5. Adopt a City policy or regulation that the appropriate pruning standards will be followed when pruning publicly-owned trees. The standards would include the “Best Management Practices – Tree Pruning” published by the International Society of Arboriculture (refer to Appendix K) and the “American National Standards for Tree Care Operations, ANSI A300 (Part 1)-2001 Pruning” (refer to Appendix L) and any safety standards that apply.

6. Require that all pruning work on publicly-owned Heritage Trees would be performed by a certified arborist or by certified tree workers under the full-time supervision of a certified arborist. Certifications are to be current.

7. Pruning should be timed so as not to interfere with nesting birds.

8. Root damage to publicly-owned Heritage Trees should be minimized. Any proposed construction work under the canopy or within 100’ of the trunk of the tree to be reviewed by a qualified certified arborist during the planning stage of the work. The arborist shall specify a Tree Protection Zone and a Tree Protection and Preservation Plan that is site and tree specific. No activity or soil disturbance in the Tree Protection Zone will be permitted unless specifically approved in writing. (Note: the above was partially adapted from the City of Palo Alto – “Tree Technical Manual” page 1-5).

9. In the vicinity of publicly-owned Heritage Trees appropriate alternative means of underground construction, such as the use of tools like an “Air-Knife” or “Air-Spade”, boring or tunneling, should be utilized to protect and prevent damage to the root system of the tree.

10. Hardscape conflicts should be remedied without damaging the root system of a publicly-owned Heritage Tree. Some methods that may be utilized include: the use of flexible paving such as sand laid unit pavers like brick or rubber sidewalk sections; grinding raised pavement sections; ramping or bridging over roots with pliable paving or wooden walkways; removing pavement and replacing it with decomposed granite or mulch; rerouting the hardscape to accommodate the current and future trunk expansion and root growth (see photograph pg. 22), even if it means the loss of a parking spot or two. This would also provide additional exposed soil surface that would be beneficial to the tree’s health.

11. Turf, at least under the drip line of the tree, should be covered with a 3”-4” deep layer of organic mulch such as ground or chipped tree prunings. The mulch should be kept at least 1’ away from the trunk of the tree. The mulch should be inspected at least twice a year and additional mulch added when it has been reduced to a depth of 1” or less through decomposition. The mulch cover will shade and kill the grass over time.

For small trees, or trees with a narrow upright growth habit, install the mulch to at least a 5’ distance from the trunk.

12. Compaction under the canopies of trees can be partially corrected by several methods. The least damaging and costly method is to install organic mulch as specified above for turf removal over the compacted area or where surface roots are exposed.

13. Require a report from a qualified certified arborist for any public Heritage Tree recommended for removal because it represents a “hazardous” condition. The arborist shall use a national standard, the ‘ISA – Hazard Evaluation Form” (refer to Appendix M), as a method to determine the hazard rating of a tree. The City Arborist has the discretionary right to approve, request a second opinion in writing, or recommend actions that may reduce the condition to a less than significant level of hazard. If this type of hazard reduction cannot be done and it is the City’s Arborist’s recommendation to remove the tree it will remain the City Council’s option to approve or deny the removal or require additional measures. (Note: the above was partially adapted from the City of Palo Alto – “Tree Technical Manual” page 4-2.)

14. For any publicly-owned Heritage Tree that is removed a suitable replacement tree shall be replanted.

15. A Technical Manual for Trees modeled on City of Palo Alto’s should be developed for the City of Carlsbad. Such a manual would not only benefit the City’s Heritage Trees, but all of the City’s publicly-owned trees. This document is available on the City of Palo Alto’s website: http://www.city.palo-alto.ca.us/trees.

The author thanks the City of Palo Alto for the excellent work that went into the development of their manual and for encouraging its free and adaptive use by other communities to promote and help provide for better tree protection and care.

A stricken tree, a living thing, so beautiful, so dignified, so admirable in its potential longevity, is, next to man, perhaps the most touching of wounded objects.

Edna Ferber

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> *For I had set my mind on making a new kind of tree book . . . not a textbook or manual, nor a tree-identification book, or still another picture book proving that trees are beautiful, but a tree-appreciation book . . . In our largely urban society, the ability to appreciate trees has become dulled—the ability to see the wonder in a tree, the magic and the mystery, the indiscribable (sic) peace and contentment that can fill our hearts when we walk in the wild woods . . . I created this book in the hope of making more people aware of the intangible values that trees can give—values to lift the spirit and refresh the soul of man.*
>
> Andreas Feininger, Introduction, “Trees”